

FOGHORN

THE MONTHLY CP/M PUBLICATION OF FOG

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FOG has been formed as a users' group for all persons who use or are interested in portable computers. Membership is available to any interested party whether or not they currently own a computer. The **FOGHORN** is published monthly by FOG for its members. A subscription providing bulk mail delivery to an address in the U.S. is included with membership in FOG for \$24.00 per year. See chart below for the additional postage required for other locations. Address all inquiries to FOG, P. O. Box 3474, Daly City, CA, 94015-0474. The Voice Phone is (415) 755-2000.

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FOG Membership Information Updates

Changes Noted in Prior Issues

The items in the list below have been changed since the FOG Membership Information brochures were mailed to most members. The month in the right hand column is the issue month in which the changes were published.

Submissions to the **FOGHORN** April, 1985
Submissions to the FOG Disk Library April, 1985
Ordering Disks from FOG Library June, 1985

First Class Postage Rates

The following is a list of additional charges which must be included with new or renewing memberships effective 3/1/85:

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Please help

It is essential that you include your account-membership number in all correspondence. *Omitting your membership number will needlessly delay shipment of your order.* It is not necessary to write a separate check for each different order. Consolidating your requests and sending only one check will save the staff considerable time.

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Holidays, Non-CP/M Machines, and Success for OCC *by Frank Morton*

It is hard to believe that another year has flown by already. Are you ready for the Holiday season? It always seems to catch me by surprise. Summer is over all too quickly, school soon begins, Halloween is here and gone, and the Christmas decorations are already up in the stores.

I had the pleasure of attending the Osborne SIG meeting of TUG-NET on the last Monday night of October. Kevin Mooney, Western Distribution Operations Manager of OCC, was there with the new Osborne 2000 MS-DOS desktop computer. I am no connoisseur of MS-DOS machines, but it looked pretty good to me.

What I found most interesting was Kevin's comment that having a couple of MS-DOS machines available seems to add credence to OCC's existence as far as some customers are concerned.

Consequently sales of Vixens have increased since the introduction of this new machine. Apparently some people think it is reasonable to purchase CP/M machines from OCC now that they are not restricting their sales to CP/M machines exclusively.

It was a real pleasure to finally attend a meeting in the Los Angeles area and to meet the large number of FOG members there. Getting to the meeting was another matter. It happened to be the evening of the first work day after the time change and with everyone driving home in the dark for the first time this fall, traffic was an absolute mess; even worse than usual. I don't know which was slower, the streets or the freeways. There seemed to be a major traffic accident on every freeway.

Product Announcements on page 70 of the November **FOGHORN** mentioned a deal between Osborne and Tigermark with reference to a security board. At the TUG-NET meeting Kevin described that board. It intercedes even before the system is booted and requires the entry of a password. This password can be up to 255 characters — any characters! Can you imagine the number of possible permutations? While first checking out the board they accidentally created a password that wasn't recorded. The board had to be removed and sent to Tigermark to determine what the "unknown" password was! Now that is some potent security for a microcomputer!

Mark Graybell (author of Media Master from Intersecting Concepts, Inc.) was also at the TUG-NET meeting. He described Media Master Plus which utilizes ZP/EM, an emulation program that allows you to run 8080-based programs and data on 16-bit MS-DOS and PC-DOS machines. Their new ACCELER-8/16 does the same emulation in hardware by using a new NEC chip. Thus it runs faster than the software emulation of Media Master Plus. In any case it is now possible to run your familiar CP/M programs on 16-bit MS-DOS or PC-DOS machines, as long as the programs are not Z80 dependent.

As long as I am talking about Christmas and non-CP/M machines in the same article, I might as well make a confession. If I had my druthers, I think I would skip over PC clones and go directly to a 286 machine. I have been thinking a lot about the Kaypro 286i which I first saw at the most recent West Coast Computer Faire. It looks like quite an advance at a reasonable price to me. Of course I have use for a potent number cruncher for engineering applications. With the 80286 cpu and a companion 80287 math processor chip it should be able to get a lot of engineering work done.

So if Santa is listening!

In the meantime my newly acquired, used Executive (or for that matter, any other good 8-bit CP/M machine such as Kaypro, Morrow, Zorba, Televideo, etc.) does a fine job for what I presently do most, i.e., word processing and spreadsheet applications. As I said last month we have a lot to be thankful for in the way of potent computing power for a very reasonable price.

We at FOG hope that your Thanksgiving holiday was a happy one spent with your family, loved ones, or special friends. As is customary at this time of year we want to extend heartfelt wishes that you and those close to you will have a most joyous Holiday Season and a prosperous, healthy and happy New Year! We appreciate your support and participation with us and believe this association with you to be one of our greatest blessings.

* * * * *

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LETTERS

DU and dBASE Discoveries

I have two little discoveries that may be of occasional use to Osborne users.

The first one is how to recover from some BDOS BAD SECTOR errors. Use DU. Start as near the offending file as you can and tell it to read sequentially. When it hits the bad sector it will tell you that it couldn't read it, but it will do so anyway.

Return to the start of that sector and read it into memory with the < command. Go back to the start of that sector (the < command moves you along one) and tell it to write that sector back to disk with the > command.

It will say write failed but it will do so anyway!

Now if you are lucky, and I have always been, you will have cleared your error. Apparently DU restores defective sector markers.

Second, users of dBASE may sometimes wonder why their printing programs stop unfinished. This seems to be because dBASE unlike MBASIC, tests its conditionals every time any change is made in them instead of at the end of its loops.

It is therefore important to be sure you place changes in counters that are used in conditionals at the end of their loops. Good computing.

Dick Fowler
Norman, OK

* * * * *

Transferring Files Between CP/M and MS-DOS Computers

Congratulations on the steady development of FOG. I have contributed a few minor tips in the past but now need some help myself.

I have an IBM-PC and an Osborne 1 sitting a few feet apart, and both have unused parallel ports. We presently use UNIFORM in Ozzie to transfer files between CP/M and MS-DOS disk formats, but wonder whether a cable between the parallel ports would offer a practical alternative?

I visualize using the IBM-PC's COPY CON: to LPT2: in combination with PIP to transfer ASCII files at parallel port speeds. Is this possible, and if so, what is the pinout for the cable?

Using the serial port is of course possible, but this would be limited to 1200 baud, and would involve us in a lot of cable plugging in and out or in some expensive switching, since all the serial ports are in use.

Neil McCubbin
Quebec, Canada

* * * * *

Some Help for the "Dummies"

As a relative late-comer to computers, and as one who will never in a million years become a "programmer", I would like to see in the **FOGHORN** an occasional column for "dummies".

I bought an Osborne 1, plugged it in and had to produce some work on it! Right away.

I struggled through the user's guide and **WordStar Made Easy**, and managed. But nowhere did either book tell me how to get rid of a dot command at the top of a MailMerge letter. (My first visit to TOG brought a friendly member who gave me the answer.) Somewhere, I have heard that when you accidentally delete something, it can be restored. (I keep forgetting to get the answer at a TOG meeting and writing it down.)

So much of the **FOGHORN** is written above my head that I find it a struggle to go through it each month and find what I can understand and use. I sort of sense what the author is getting at but I know I can never really grasp it because I am not that mathematical.

I would really like to see a column for tyros that takes "documentation" and translates it into "simple instructions for the self-taught". And has things like "what the instruction books don't tell the beginner" — all those odd-ball facts that float around the periphery and never work their way into instruction books or documentation.

So find a brand new computer user, plug him/her into an Osborne, and listen to the questions. Then supply the answers in the **FOGHORN**.

Thanks for listening.

Fran Ries
Kill Devil Hill, NC

[Your last thought is the same one that must go through the minds of most beginners. I know I thought of it when I started. I was even invited to co-author a book written around that idea (alas I didn't have the time). It's something that really has to be captured while it's happening to you. But here's what I can do now. I can sure recommend TIPS FOR TYROS to those "brand new computer users" and direct their questions to that column. Along with this new effort, I am asking those of you out there that have the answers, to submit them to TIPS FOR TYROS — you don't even have to wait for the questions. David]

* * * * *

Help: Information Needed

Does anybody at FOG or anywhere else have any knowledge of how to get an Osborne 1 to drive a Corvus 20 MB hard disk system, or know where I can find a controller for it? Any information might add some disk storage (10-20 Megs) to a new Osborne RCP/M (possibly FOG) system.

Please send ANY information on the Corvus and Osborne 1 to the following address.

David Bonds
9607 Moorberry Lane
Houston, TX 77080

* * * * *

YOU NEED THE NEW

CompuMagic™ UTILITY PACKAGE

Regardless of which word-processor or data-base program you use, a lot of your work is done with utility programs. You use them to copy, erase, rename, set-up function keys, get directory listings- and you use them every day. Until now many of them were slow and cumbersome and difficult to use.

That's all changed with **CompuMagic's** new Utility Package. Your life will be easier, regardless of what you use your computer for. These programs simply do more and work better than the programs that you're currently using to do the same things. They were written by the wizard of **CompuMagic**, who insists on the same ease of use at home on his CP/M computer that he has on the big machines he uses during the day.

LOOK AT ALL YOU'LL GET!!!

CMAUTO allows you to prepare startup programs, either to replace an existing Autostart program or to create short-named programs that replace typing long command lines. They allow you to "log to B" also. And the new full-screen set-up allows easy editing of old programs.

ERASE, FileCOMPare, RENAME and **COPY** allow you to use wildcards and "ask me" options. For instance: You've just solved a difficult programming problem and want to rename TEMP.C, TEMP.REL and TEMP.COM to PROGRAM.C, PROGRAM.REL and PROGRAM.COM. One command: **RENAME PROGRAM.*=TEMP.*** and you're done. You can use all of these from within WordStar! And you can even prepare a list in advance for ease in backing up your work.

DoubleSpace and **WordCount** are indispensable for writers. The new DoubleSpace lets you keep the original unaltered! WordCount and DoubleSpace can be set to ignore dot commands! And WordCount is accurate.

TYPIT lets you turn your computer into a typewriter or notetaker with one-line editing capabilities. Ideal for producing short programs and .SUB files, too. Or addressing envelopes.

SORT will sort any file line by line.

SCREEN is the screen copy program that captures everything going to the screen and copies it onto a disk for later use. Ideal for debugging, documentation. Even works with MBASIC.

A.COM corrects typos, turning A:WS into A:WS!! And the fabulous MagicDIR programs:

MDIR and **MDIRS** can give you directory listings for more than one drive, and more than one file reference. For instance: **MDIR A:*.DOC B:*.BAS**.

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Super Fast FOG and dBASE II Puzzles

Next to Ozzy himself my First Osborne Group membership has been my most valuable acquisition and the **FOGHORN** has been my most powerful and useful peripheral. I wish I had joined a year earlier.

What service I get from FOG!

When I wrote about my missing June issue, I had a fresh copy in the mailbox before I knew it. What's your secret? I know for a fact the Postal Service hasn't moved that fast since the last pony left Sacramento for St. Joe a hundred years ago. So who really delivered it and how did they get into my box?

While I'm rambling, let me say something not so nice about dBASE II ver. 2.41, but something good about Ashton-Tate who makes it.

I upgraded a while back and while I'm pleased overall with what I received, there are a few puzzlements . . . er, bugs, maybe.

If I use the command:

? #

I don't get the record number as I did under ver. 2.3b. Now I get five or more asterisks in a string:

The same holds true for the command:

DISPLAY #

SET INTENSITY ON/OFF doesn't work.

The fact that the BROWSE command now allows specification of fields wasn't mentioned in any of the upgrade documentation I got. I wouldn't have known about it except for a nice review published in the **FOGHORN** a while back.

The biggest glitch I found and the one that could cause the most trouble occurred when I tried to balance my checkbook and dBASE II doubled — that's right — DOUBLED the amount for total checks written. It scared the heck out of me but after I recovered I realized how fortunate I was. It could have doubled the deposits, and, if undetected, a monster overdraft. (Unlike E.F. WHATSIZNAME, nobody listens to me, so my overdrafts might have meant an unanticipated trip to the slammer.)

Back to the problem. It occurred when I used a .DBF named CHECKSTRU.DBF copied to two other files, ACHECKS.DBF and BCHECKS.DBF. Now I entered half a dozen A type checks into the first one and no B type checks into the second one. I commanded a SUM of the ACHECKS.DBF to memory variable 1 and a SUM of the BCHECKS.DBF to memory variable 2. At this point I added 1 + 2 and got way more in total checks than I knew I had written.

On investigation I found out that my command structure had done this:

USE CHECKSTRU.DBF ↵

COPY STRU TO ACHECKS ↵

COPY STRU TO BCHECKS ↵

(appended 6 checks to ACHECKS)

(appended 0 checks to BCHECKS)

USE ACHECKS ↵

SUM amount TO memvar1 ↵

462.62

USE BCHECKS ↵

SUM amount TO memvar2 ↵

462.62

This is the error. Since the .dbf had no records it should have yielded 0. (Shouldn't it?)

? memvar1 + memvar2 ↵

925.24

Now for something good.

I wrote Ashton-Tate about my lack of documentation and received a fat packet of additional information within a reasonably short time. When the problems began surfacing, especially the checkbook one, I sent another letter telling them about my experiences with the new ver. 2.41.

Lo and behold, the other evening the telephone rang and I was greeted by service support representative Fred Crownover. He spent a good deal of time on the telephone attempting to sort out my problems, agreed to send me some more information including something about the new ver. 2.43 and even made a suggestion or two about how I might improve things on my end while waiting for the additional information to arrive.

I was really surprised to get the call and I think Ashton-Tate deserves a big old **WELL DONE** for providing this kind of support to its end-users.

Thanks FOG, thanks Ashton-Tate, thanks to all who keep sending in those splendid **FOGHORN** articles that make using Ozzy so much more enjoyable.

Carl Greene

P.O. Box 13

Nixa, MO 65714

* * * * *

A Few Questions

1. Are the new CP/M **Sidekick** type software packages usable with the Executive or just with CP/M 2.2 computers? What if the Executive is already using SmartKey II with a 7.5K definition table? Does the size of the definition table matter? Will these new programs still work with SmartKey in memory?

2. How can the MDM740 program be modified to eliminate the **space** character for automatic dialing from the Executive? Thus, when a number is dialed, the computer sends out, e.g., the character string **ATDT space 222-2222**. This is supposedly Hayes compatible protocol. However, I have a Visionary 100 modem, which uses Hayes compatible protocol, but does not accept the **space** character between the ATDT and the phone number.

3. Can EXCLOCK be modified to work with SmartKey II on the Executive?

4. How is it possible to have SmartKey II followed by Wordstar to autoboot on the Executive?

Paul D. Supnik
Beverly Hills, CA

* * * * *

Stands, Stats and Shift-TAB

At the meeting of our PHROG, held at the Merck-Sharpe & Dome plant in West Point, PA, I described how I made a very utilitarian printer stand from a shelf out of an old eight cubic foot refrigerator. All you have to do is notch the front and back support bars about 4-1/2 inches in from the sides, and bend them down to form the legs. You can make an even stronger stand if you can use the cover from the bottom cold-well.

Another thing I want to mention is that, as the Secretary/Treasurer of our mens' Thursday night bowling league, I found it necessary to go to the computer to keep the statistics. I have worked out a program that makes keeping stats extremely fast and easy compared to the time spent with paper and pencil as the sole means. I have an Executive, but the program will run on the Ozzie. A FOG member can send me a disk and postage and I will put it on the disk and mail it back to him or her. It runs under S/C, and I have a small DOC file that explains it, if the person is unfamiliar with its' workings. My address is at the end of this letter.

The third thing I wanted to mention is the way I found to boot the drive B on my Exec. I have read, of course, how to do that on the O-1, but no one I asked could tell me how to do it on the Exec. What I did, quite simply, was go about a systematic trial and error bit on the keyboard until I hit on the combination. It is, strangely enough, almost the opposite of how to do it on the Ozzie, being the SHIFT-TAB combination!

Well, that is all that I have to offer.

Edward L. Dixon
204 North Drive
Tru-Vale
Rehoboth Beach, DE 19971
* * * * *

SuperCalc Problem

Your editorial comment concerning the use of /X programs with SuperCalc (May, 1985 *FOGHORN* p. 38) has prompted me to submit this query to you.

I thought it was a proper question for Sorcim's "Hotline", but the correspondence which I sent to them has been greeted with resounding silence.

My problem is, in essence, that the & does not suspend reading of the eXecute file when it is used immediately after /. In detail:

Attempted eXecute file in SC2. First line:

/LB:SVB,A&↵

The system reads this line correctly, one character group at a time, so that the prompt line shows:

Load,B:SVB,A11

The & is required in order to give a 22 second delay while the 12K file, SVB, is being loaded.

Following the procedure which was successful with the first line, the second line was entered as:

/MR11.23

DISASTER! The /M forces the system to consult the program disk for seven seconds, presumably to get the Move subroutine. While this is going on, the system kept reading with the result that Row 11 was lost forever.

The next attempt was to use a second line:

/M&

This failed because the program refuses to recognize the & in this position as a suspend command.

Considering the number of patches available for WordStar, I would expect that somebody, somewhere, has done a few touch-ups for SuperCalc.

Here's hoping you will disclose your tricks in an early issue of *FOGHORN*.

W.R. Lundry
Red Bank, NJ

[Well, W.R., you've got some trouble, but I'm afraid I don't know what it is. First of all, I don't understand why you need delays. Your commands should work without them. The system just waits for the file to load before it will look for the next command. The "&" in "/LB:SVB,A&↵" will stop the eXecute program after the file SVB has loaded; the "↵" is not required after the "A" for ALL. If you want to stop the eXecution after the file is loaded, put the "&" on the next line. I've been doing these things for years, but on a different CP/M 2.2 machine. I duplicated your commands on a standard DD, Osborne 1. They worked fine, with and without the "&". When my eXecute command called "M/&", the screen stopped at "/Move,"; waiting for my next move. If you need delays, try "^D". You can put them in with ^PD if you are using WordStar's N(on-document) mode. Of course, you'll need a string of about 44 of them for a 22 second delay. (By the way, my 13K CAL file loaded in just 15 seconds.) Anyway, you shouldn't need to use "/M&", but if you like, it should work. "/MR11,23" should work too . . . it does for me! Does anyone have any suggestions for W.R.? David]

* * * * *

A Little Paste Goes a Long Way

I have read several articles about contact oxidation of gold/silver/copper connections in the Osborne. I am a 73-year-old coot with a few ideas — some good.

Electricians use "contact paste" for copper/aluminium 110V plus connections. It is a dirty-looking paste lubricant. Wiping contacts with this will solve the problem.

Radio Shack sells a CB Antenna Lubricant that will work. The old standby — Vaseline — is not to be overlooked, either.

If Ozzie operators are camper/trailer/motor home bugs, they can use "contact paste" on clearance lights, etc., and have a carefree life.

Just a little paste goes a long way.

Howard L. Ives
Beaumont, Texas

* * * * *

A Call for a Philippines User's Group

My request this time is for any CP/M users in the Philippines to get together (by mail) and form a user's group. To that end, please publish my address and maybe others will write me. I already have the address of Father Jack Walsh who wrote to FOG to make contact with me.

I recently got a box of Datalife floppy disks that would not turn in their sleeves and so gave BDOS errors. I don't know if it is the tropics or what, but I will say that I have never had any trouble with 3M, Elephant, or Media Tech disks.

As far as the tropics are concerned, I work at 95+°F. And have not had any trouble with an Executive. Because it is at the limit that the Exec is rated for, I set a small fan on the table behind the computer to blow at the computer's fan housing. It seems to work. Everything stays cool and the overshoot, coming over the computer keeps me cool too.

Russell Reed
Pinamalayan 4416
Oriental Mindoro
Philippines

A Do-It-Yourself Fan for the Osborne

After a couple of years of almost constant use, the disk drives on my Osborne 1 started to give me trouble. The repairman, who had considerable experience with Osbornes, blamed heat. "The best investment you can make for reliability is to get a fan," he said.

Although specially-designed fans are available for the Osborne, they are expensive. I decided to see what I could rig for myself. What resulted works fine, as long as you don't use your Osborne extensively as a portable.

I purchased a fan at a local Radio Shack store for under \$15. It is manufactured by EG & G Rotron and is a Sprite model SU2A7. The fan is 115-volt and measures 3-1/4 inches square and 1-1/2 inches deep. Of course, it doesn't perfectly match the Osborne's cooling port.

With wire, nuts and electrical tape, I spliced the power wires to an extension cord so the fan would draw power from my switchable outlet box. I throw one switch and the computer, monitor, printer and fan all come to life. I put foam tape on the fan's edge to dampen vibration and set the fan over Ozzie's vent to blow into the computer (I smoke a pipe and didn't want the smoke drawn in through the front of the machine).

Air flow seemed fine, but there was too much noise from vibration. The solution to that was to insert four refill erasers, intended for a mechanical pencil, into the holes on the corners of the fan. (It took a little tape to make them tight.) This raised the fan off the machine a 1/4 inch, reducing the noise to an acceptable level and also improving the air flow.

The fan doesn't look elegant, but its comforting to know that when I'm really cooking on the keyboard, I'm not also cooking those expensive disk drives.

Jim Ehle
Eugene, OR

Comments on REMBRANDT and a Question

I recently upgraded from the OSBOARD graphics package to REMBRANDT. I use the **xy** plots and was attracted by the capability of displaying up to three curves on the same graph and the ability to include graphs in text printed by WordStar. The graphics using the characters:

·
+
o

is a welcome improvement. With one exception the documentation is very good.

The exception is, of course, the feature one wants to use most. In this case the data file used to produce **xy** plots is clearly described for graphing single variables but not for using two or three variables.

Fortunately the supplied example **xy** graph's data file on the disk is a two variable plot. What this data file reveals is that all the **xy** data pairs for the first character are listed and then are followed by the **xy** data pairs of the second character. Printing a graph in the middle of a WordStar document worked the one time I tried it.

Now for a question for the readers. I have the Super Spell Guard program but had not tried using its capability to operate from within WordStar, since, with single-sided drives, it is a tight fit getting all the programs on one disk.

The recent **FOGHORN** reviews of spelling checkers encouraged me to try such usage. With the initial setup I used, Spell Guard would begin running from within WordStar and then, as usual, ask for the dictionary file name. Attempting to type in the file name would lock up the computer, and a reset was needed to gain its attention.

Reinstalling Spell Guard with a preset dictionary file name got me through the spelling checking but when the misspelled words were presented for review, the screen went into a fast vertical scroll mode which could only be stopped by a reset.

I next tried to run a TURBO Pascal (.COM) program, which needs keyboard input, using the Run option within WordStar. Again system lockup for keyboard input. I then referred to the instruction book (Volume 2 that came with the Executive; p. 129). An addendum is pasted in which says:

"Programs that use the CCP (Console Control Processor) area of memory cannot be run from within WordStar using the R — Run a Program command. The programs Setup, CP/M Copy, Chargen, Execst, and Sid are examples of such non-runnable programs. If run from within WordStar, these programs will result in keyboard locking up."

This seems to indicate that the part of WordStar that watches when other programs are running is written over the CCP. Is this unique to the combination of WordStar 3.3, CP/M plus, and/or the Exec.? Does a fix exist?

Larry Crooks
Richmond, CA

Cooperative Data Bases and a dBASE Conference

I would like to second Dick Ezzard's call in the June, 1985 *FOGHORN* for cooperative data bases but with a little different emphasis on some points.

I thought I detected a note plugging PCFILE as some sort of standard and I feel that a standard is unnecessary. There are at least three basic standards out there now: ASCII, SDF and DIF.

Ninety per cent of the data base systems use one of these standards as their format and most of those DBM's have some facility to translate from one to the other. There is even a technique to download IBM's own peculiar mainframe nomenclature to a micro.

So don't worry about it; just throw it on the board or send it to Dick or myself — we'll love ya, baby. You get lollipops and hefty immortality because we send it all over the country with your name on it.

We are starting a dBASE conference on FOG FONE #11 (415) 285-2687, and while we will not handle technical questions about software other than dBASE, we do encourage discussion of all data base-related topics.

Please don't forget that MailMerge is a pure and simple data base. You could contribute your MailMerge files if they are at all pertinent. As an example, I started a data base of all the pizza places in San Francisco so that I could find out, not only their business hours and geographical proximity, but also whether or not they served garlic as a topping.

Now that kind of thing is no big deal to key in and you might think it useful only to San Franciscans. WRONG! If some Fogger in Chicago gets intrigued by this, he might write to me or pick it off the board to see how I arranged it. Pretty soon we have a Chicago pizza list and you can astound your business associates in Chicago next trip, with this neatly-arranged, categorized list of THEIR pizza joints.

The point here is that a guerilla data base of, initially, very modest dimensions, can mushroom (oops . . . just discovered another field for my pizza data base) into an extremely revolutionary system.

Two other data bases we are working on are illustrations of "intelligence" bases about all countries in the world as to size, literacy rate, phones per capita, political persuasion, and most significantly, military capability. If you call up a particular country, a menu choice prints out the pertinent facts about the neighboring countries that lie on her borders.

Our second project is an index of articles about dBASE with keywords that numbers over 300 entries (and we are by no means nearly through). I was surprised to learn that no index existed electronically for the issues of the *FOGHORN*. At 80 pages an issue, I consider my *FOGHORN* an invaluable resource that is, unfortunately, getting harder and harder to use.

There is a dandy dBASE program called LIBRARY that could be used for inputting, and the data base then translated to nearly any 'DBMS out there. I think one of the misconceptions existing is that a data base is overkill for your 100-album record collection, but it becomes a pressing necessity at 1000. A data base certainly became so for me with 150 disks of public domain for my Osborne.

I think PCFILE is a good place to start because anything done in it can easily be absorbed by dBASE or most of the other programs, and since PCFILE is close to some of the limitations of dBASE, they seem an ideal match. But do not assume from our exhortations, that only PCFILE data bases will be welcome.

Darrell Bross
San Francisco, CA

[An index of the *FOGHORN* is now available on the library Application disks, numbers 60 and 61. Ed]

* * * * *

Mannesmann Tally and the Story of the Printer Box and Manual

I would like to add my two bits to the running commentary about company support after the sale. Based on a favorable review in *Consumer Reports*, I bought a Mannesmann Tally MT-180L dot matrix printer. I made the mistake of trashing the box it arrived in and when I moved cross country in February, it was packed by the movers in a regular moving box.

Either during or after the move, the printer got out of alignment and the descenders printed light. Rather than go through the hassle of sending it back to the factory for a minor mechanical adjustment, I ordered a service manual and a new shipping carton, hoping to avoid a repetition of the problem in the future.

The 42-page manual (mostly fluff) cost me \$29.50 and the bare box shipped knocked down (without the foam inserts that convert the flat cardboard box into a shock-resistant packing case) cost me \$14.06. The box is useless but is nonreturnable. The two parcels — manual and box — were shipped separately, so I was billed \$3.50 "handling charge" — twice.

The point of this valuable (\$43.56) lesson is that some companies leave you with a good feeling after you have dealt with them and some companies leave you with a sour taste. Mannesmann Tally is definitely in the lemon category.

The printer is well-built and puts out acceptable copy, but the ribbons — and anything else you order from the factory — are way overpriced. Because it's an expensive brand, the local dealers aren't interested in stocking parts, manuals or ribbons, so the consumer is forced to deal with the factory; a lose-lose situation.

To end the letter on a happy note. As the ribbons from M-T were so expensive, I bought a minimum quantity (a case of five) and a Mac Inker re-inker from Computer Friends. I've reached the point that the less I have to do with Mannesmann Tally the company, the better, and the re-inker is a step in the right direction.

I had to modify the Mac Inker slightly to work with my ribbons, but after I did, the re-inker worked fine and does a reasonable job for less than the cost of a second case of ribbons.

Incidentally, I read about the Mac Inker in a review in the *FOGHORN*, and, aside from the poor choice of name, the Mac Inker has nothing to do with Apple.

David Thomson
Highlands Ranch, CO

* * * * *

A Standard for Documenting Programs

I enjoyed reading Claude Ostyn's article *Software Standards Please!* in the June, 1985 *FOGHORN*. Also, I agree with his ideas and have applied these principles myself. For example, since 1980, I have developed many programs and I have found that adopting consistent programming standards and documentation has allowed me to update and optimize my programs.

In documenting programs, I would like to offer the standard that the Wisconsin Association of Data Systems and I follow. The steps are:

1. Cover page giving a descriptive name of the program, its author and other people who assisted in the program's development.
2. Title page stating the name of the program, the author, the programming language used, the computer system used, the terminal or monitor used and the size of the program.
3. An Abstract page that describes the objectives of the program and its unique features.
4. A Statement of the Problem Page. This describes why the program was written, what differentiates it from other programs and what methods were used.
5. A Program Description which includes:
 - the Solution to the Program such as the mathematics used, the derivations of the mathematics or algorithms, and the basis for using them;
 - a Flowchart or similar program outline which describes the data used and the processes involved.
6. An Input/Output section which describes what type of data to enter into the program and how to convert the data into a form the program can read.
7. An Operation section which describes the procedure needed from the very beginning to run the program along with the tolerance limits of the input format.
8. A Sample run that shows input and output in the way the program actually runs.

Following this standard, I have been able to develop game simulations, input/output packages for CP/M 2.2 machines, a multicolumn generator program to use with my word processing files, virtual memory subroutines to increase my Osborne's processing ability, and statistical packages to aid in my life science and computer science studies.

Finally, I won third place in the Wisconsin Association of Educational Data Systems Programming and Documentation Contest for my FORTRAN Plotting routine. If anyone is interested in this routine, I can be contacted at the address below.

David Kanecki
4410 19th Ave.
Kenosha, WI 53140
* * * * *

The Patchman Parallel Switch

I have found a product that I've been extremely pleased with and would like to share my experience with other users.

I recently added a Juki 6100 printer to my existing Okidata 83A and quickly became tired of switching cables back and forth between the two printers. In looking for a parallel A-B switch box, I found that the cost generally ran over a \$100 until I found a product listed in the Spite Software catalog.

That catalog listed switch and cable products sold by the WRAM Corporation, 8243 SW Cirrus, Beaverton, OR (503) 641-3550. One product was an A-B-C "Patchman" parallel switch for \$69.95. Spite's comments about WRAM stated that WRAM normally deals in large quantities with companies and government.

A phone call to WRAM was answered by Seth who handled all of my questions in a knowledgeable and professional manner. He informed me that I also would require certain additional cables which are priced at \$13.95 each with the correct connectors.

I subsequently mailed an order along with my personal check. The order was received within a week which indicated WRAM was willing to trust me before the check was cleared. How many companies today do that?

The Patchman which is advertised as "frequency stable, electrically isolated and shielded" is small (approximately 1-1/8" high, 10" wide and 4-3/8" deep) and permits directing the output of the Osborne IEEE port to any of the three output devices by use of the push buttons. The cables and connectors are of quality materials and are well constructed and operated correctly immediately.

I would recommend both WRAM and their products without hesitation.

Bill Cowdin
Burbank, CA

* * * * *

Beaten By SIN and COS in SC2

I am an amateur astronomer and enjoy using my Ozzie for different applications. A while back I was creating a spread sheet with a number of formulae and I had particular trouble with the **SIN** and **COS** functions.

I entered as follows:

$(\text{SIN}(\text{F6}) * \text{SIN}(\text{C12})) + (\text{COS}(\text{F6}) * \text{COS}(\text{C12}) * \text{COS}(\text{F8}))$

and came up with .02649515 instead of a triple-quadruple checked answer of .6031.

Here F6=7.3994, C12=34.3178, and F8=-49.1481, are the substituted variables.

I don't blame the machine but I think there is something I must not understand about the functions **SIN** and **COS** in SC2. HELP!

Chris Berthaut
New Orleans, LA

* * * * *

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Telex Rule Changes

Wouldn't you know as soon as I open my mouth and act like an expert in Telex, they change the rules. Sorry.

Since I sent you the letter in the December issue of the **FOGHORN**, RCA has done two things:

- 1) Started charging a \$15 "service fee" for the Databank ® service (their computer that holds your messages until you call in and access your "mailbox") and,
- 2) also started charging a monthly minimum of \$20 (no charge if you do not use the service at all during the month.)

Time charges went up too. Real time service to RCA subscribers is up to 60 cents per minute and 90 cents to others (ITT, WUI etc.).

What the hell, it's deductible.

John Matthiessen Blow
Fort Lauderdale, FL

* * * * *

A Letter to *Personal Computing Magazine*

Letter's Editor
Personal Computing Magazine
10 Mulholland Drive
Hasbrouck Heights, NJ 07604

Three years ago I was "sucked in" by Adam Osborne. For \$2000, I received a transportable computer, the CP/M operating system, SuperCalc, WordStar, Personal Pearl, dBASE II, AmCall, and a modem.

Three years later, the bundled software programs still aren't too shabby, but best of all, I know how to work them! The computer is extremely important to both my business and personal work, so a year ago I bought another Osborne 1 for \$700 so I wouldn't have to drag the original to and fro. FOG, First Osborne Group, is a 16,500 member user group, that publishes the renowned **FOGHORN** monthly magazine that is loaded with help and ideas.

An acquaintance made an initial investment of \$200 that ended up costing him \$3500 for a Commodore 64 with a myriad of connecting cables, sundry hardware and mediocre to poor software. When he took a disk drive in for service, he was informed that they didn't perform service on "toys".

While still working with software that came with the machine three years ago, in *Personal Computing* I read with interest the "promises" of the new and latest developments and can only say "Bless you, Adam Osborne; you didn't make promises, you delivered!"

Harry B. Williams
Lugoff, SC

* * * * *

Booting the Executive with the Tab Key

Wirt Ragsdale of Bedford, Ohio indicated how to boot up on drive B by using the quotation mark. As far as the Executive is concerned, you can do the same thing by booting up with the tab key.

George D. Maynard
Bound Brook, NJ

* * * * *



Re: An Ecosystem Adventure in SuperCalc

In my copy of the **FOGHORN** Vol. IV, No. 12, there is a digit missing in the article. In the "Growth Rate" column, the "alligators" line (6th from the bottom of the first column, pg. 18), the growth rate formula, last term is:

.05*E1

This should be:

.05*E13

A. Robinson

* * * * *

Re: WordStar, Etc.

The fourth table in Alan Chattaway's article *Wordstar, Etc.* in the October, 1985 **FOGHORN** (p. 38) was reproduced incorrectly. It should look like this:

TEST #	Voltage	Current	Wattage
1	1.5	1.0	1.5
2	2.5	1.7	4.2
3	3.5	2.3	8.2

Now, that is better.

* * * * *

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* * * * *

TIPS FOR TYROS

The Useful Art of Mass Destruction

by Dick Ezzard
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WordStar makes it easier to delete than to retype. By that I mean it is easy to delete 15 or 20K of text in order to retain 1K; easier to delete than to retype that one little hunk you need. Even if retyping is not involved, it is expedient to read in 16K and delete 15 in order to get one.

If material you need is in another file, the alternative is to close the file you're working in, open the other file, mark the little block you want, send it out to an intermediate stash file, close up the second file and go back into your original place, then read in the small hunk. Ugh! Far simpler to just read in the second file to where you are working using ^KR (control KR) and mass destruct (by use of block deletions) everything you don't need.

Once you know what you are doing, massive deletions take but a few seconds. Two sequences of control codes I use (often!) are:

^KB^QC^KK^KY

and:

^KK^QR^KB^KY

You can type these sequences as fast as you like without pausing for each individual command to take effect. The WordStar command buffer will receive 'em faster than any human can go. (The one exception is during disk activity.) Better yet, put these sequences on programmable special function keys (using a program such as SmartKey, Prokey, ManyKey, etc.), and the touch of a single key will make tons of text just disappear. (But be very careful!)

The first sequence will delete everything from where you are working (current cursor position) all the way to the end of the file. The second sequence destroys from the current position to the top of the file.

What you want to do is skim the cream by vaporizing the milk above and below the cream layer. Since information is an infinitely reproducible commodity, there is no cost involved in destroying most of the copied material in order to get at the cream.

Here are a couple of examples of use:

Let's say you are preparing to write a letter. You open a new file called DRAFT.LTR. Knowing that the guy you want to write to is on your mailing list somewhere, you immediately read in

a file called MAILLIST which contains 876 names and addresses. You only want to use one of these.

You do a ^QF to find the line with your correspondent's name on it. Put your cursor at the beginning of his line and use ^KK^QR^KB^KY. Bang, all the preceding 421 names and addresses are gone. Put the cursor on the beginning of the line following Joe's line and do ^KB^QC^KK^KY. Everything is gone but Joe's stuff.

You need to exercise a little more care if you are reading a ton of text into a file which already holds some info you want to retain. Let's say you already wrote some text to Joe and now you want to bring in his address which is in another big file.

Go to a definite location in the file you are working in, e.g., top or bottom, where you will bring the stuff for selective retention and mass deletion and read in the monster MAILLIST. Mark ^KB, then find Joe. Position the cursor in front of Joe and do a quick ^KK^KY. Then drop below Joe's line and do your ^KB^QC^KK^KY.

This same technique of mass destruction works for bringing over one note or one paragraph from a file containing many notes.

And I often use block deletion to weed out (on a massive scale) much of the traffic I download from RCP/M's or other information utilities such as CompuServe.

Let's say I download a file of 50 or 60 messages. Of these I may want to retain two or three (if that many). I use WordStar to scan the file. Right at the top I put a ^KB, then start scanning. If I come to something I want to save, I do a ^KK^KY which block marks and deletes everything in front of the item to be retained. Then I drop down and put in the ^KB to prepare for my next massive block deletion. When I get done I have a screen or two of important stuff to be added to my current journal file.

Speaking of journal files, mass deletion is the method I use to cull chronological journal files in order to gather up scattered notes on a particular topic. Let's say I have been entering notes at random in journals for February. Now my boss wants a paper, letter, article, whatever, on a particular topic. All I know is the info is scattered throughout February in various notes.

OK, open a file on the topic. Now read in the first February file and delete everything except the pertinent notes. Read in the following February files and do more mass deletions. You are left with a file containing only the notes you need on this topic. And your journals still exist in their original chronological form for further use, making up other topical files.

In sum, mass destruction of most of a file copy is the fastest way to grab a small piece of text. Practice swinging that ^KB^QC^KK^KY axe.

* * * * *

WordStar and the Movies

by Dick Ezzard

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Once efficient block marking is mastered (see another short article, *Words by the Shovelful*, November, 1985 **FOGHORN**) you may want to do something with the blocks you mark so well. The possibilities are not all that confusing. With a marked block you can:

Delete it.

Copy it to another file.

Copy it to another location in the same file.

Move it to another location in the same file.

Of these possibilities, the one we'll concentrate on this time is the block move.

I have seen many a WordStar user go through file reorganization by block moves. For some reason the first approach (and one many people get stuck at) is to "gather blocks unto" a particular location or locations. The user moves through a scattered note file, comes to a spot where he thinks "this is a good place to have all my introductory stuff." He posts himself at that home base and then laboriously goes through the file, finds an introductory type paragraph, marks it as a block, goes back to his base, brings in the block, removes the block marking, and goes back out searching for the next pertinent hunk of material.

OK, "gathering" blocks that way does work. But with a big file of well-scattered material, that procedure makes for long sessions. You can make faster time by using the conceptual approach of "shooting blocks at targets."

Target Shooting

Once a block is marked, the combined command sequence:

^KV^QV (^ means the control key)

will send the marked block somewhere and snap the cursor back to the location where the block just came from. Now what you can do, is run through a file, mark blocks or related material as you go, and shoot 'em at a target by marking a target, then doing **^KV^QV**.

What is the target? **^KV** always moves the block to the "current cursor position." So just before a move, you toss your cursor out to where you want the block to light — kind of like springing a clay pigeon into the air, then shooting it with your block. The secret of efficient block moves is being able to snap your cursor momentarily to a particular location where it serves as your temporary bull's eye. No problem getting back to the place where the block was fired off from — just do **^QV**.

The command sequence:

^KV^QV

together "swaps" the block and cursor positions.

So now the skill you want to develop is fast cursor moves to known locations. Since the end purpose is far-flung movement of a fairly substantial block, a lot of the cursor movement commands can be discarded as not suitable. You don't want to fid-

dle with the cursor, you want to jump that sucker around. Moving the cursor on the same line, or even on the same screen is just piddling around. Let's GO somewhere.

The Top and the Bottom

Two great locations that you can always get to in a WordStar file are Alpha and Omega — the beginning and the end. The command **^QR** snaps the cursor to the top of the file, **^QC** to the bottom. Think about this a minute. Here you are going through a file. You come to a hunk of material configured as a "paragraph." You have three easy locations for classifying that material.

1. You can leave it absolutely alone and it stays in the "middle" of the file.
2. You can block mark it for movement, then do **^QC^KV^QV** and shoot the cursor to the top of the file, send the block after it, and come right back to where you are working.
3. Or, mark it, do **^QR^KV^QV** and the block shoots to the bottom of the file.

Remember that you can type these commands as fast as you want. The command buffer will take 'em in as fast as you can type. You do not have to wait for the **^QR** to take effect before you type the **^KV** and **^QV**. (Except: Watch out for disk accesses.)

The faster you type, the less screen updating you will see and the quicker the whole operation will take place. And you will be back where you sent the block from.

By the way, the block is still marked at the location you sent it to. You can either remove the marking with a **^KH** or just leave it alone, in which case it comes off automatically when you mark your next block. (Or if you have second thoughts, you can bring it back with another **^KV**.)

Another thing to remember is to always separate your blocks with blank lines and always include the trailing blank line as part of the block. Standardizing your block format this way ensures that your blocks will still be separate paragraphs wherever you send them to; that they won't get "welded" to other material.

For many reorganization jobs, those two command series are enough to get going.

One Target Could Be Enough

You can even do a creditable job with just one:

^QR^KV^QV

Divide your material (in your head) into a number of logical categories. For this example we'll use "beginning, middle, and end" as three logical bins for sorting. Starting at the top of a file in which material is scattered and disorganized, go through and mark the material which belongs to the logical "middle" and throw it down to the bottom of the file with your **^QR^KV^QV** sequence.

After once through, go back to the top of the file and start down again, looking for logical "end" material. Throw this stuff to the bottom.

When you get done with this second pass, your file will be organized (in a crude kind of way). The "beginning" stuff you

left alone so it sits at the top. The "middle" stuff was thrown down first, but drifted back up to the middle as you removed the "end" stuff on the second pass. And of course the "end" stuff is all at the bottom of the file.

For a finer organization, now you go through each part of the file on its own. Work on the "beginning" stuff and send paragraphs which are the "beginning of the beginning" to the bottom of the file. Then rejump to the top and send down the "middle of the beginning" stuff. Finally dispatch the stuff for the "end of the beginning." When you look at the bottom of the file you will find your "beginning" arranged more neatly in three subcategories. Block it and move it to the top of the file.

Cascade the Moves on a Single Key

Many programs and/or systems allow you to arrange a number of WordStar commands so that they cascade on the touch of a single programmed "macro" key. Some of these programs are SmartKey, ProKey, ManyKey, MagicKey, SuperKey, QuickKey. If you have a facility for programming special function keys that will cascade WordStar commands, it goes without saying that the commands to move a marked block to the top or bottom of a file can be fixed up so that the touch of one key sends the block to its destination and returns you to where you are working.

Place Markers as a Whole Set of Targets

For a finer organization of more targets to which you'll shoot blocks, use WordStar's temporary place marker commands. You get up to 10 of these in a file with the commands:

^K0 through K9

Just post your place markers as temporary sorting bins, each on a line of its own.

<0>
<1>
<2>
<3>
etc.

Now as you move through a file marking blocks, you have more locations you can easily snap your cursor to, where it serves as a target for the block move. Mark a block, then do:

^Q2^KV^QV^KHh

Bang, the block goes to place marker two and you're back at your current working position. For reorganizing scattered material I have a set of special function keys which cascade WordStar commands like this:

^Q1^KV^QV^KH	(on special function key 1)
^Q2^KV^QV^KH	(on special function key 2)
^Q3^KV^QV^KH	(on special function key 3)
^Q4^KV^QV^KH	(on special function key 4)
etc.	

A touch of the appropriate key sends the marked block to a specific bin marker and returns.

You can even have a special function key which takes care of posting a rack of sorting bins for you:

^K1^K2^ etc.

Or if you are more fastidious, you can go through the file and post the place markers at logical locations of your own choosing, e.g., under the appropriate headlines of an outline.

Unfortunately, WordStar's place markers are temporary, in that they do not survive an edit save and exit. The next time you come back into that file the place markers will be gone. It is a simple matter, however, to devise permanent place markers of your own and post them next to the temps, and use them as signposts for reinstalling your place markers on the next edit. To keep track of place marker three, I would use **[3]** and install the temporary WordStar marker right next to that private symbol the next time I come back into the file.

Cursor on Patrol

For those occasions when it is inconvenient to shoot from the hip at an off-screen target, you can patrol for the correct destination for a block by moving around the file manually. The trick here is to be sure you have marked your block before you go out looking for where you want to send it. Line your ducks up first. (This is the opposite of the more cumbersome procedure of finding a location, then go looking for the block.)

The best procedure is:

- Mark your block.
- Send the cursor out on patrol looking for a likely location to be the target.
- When you are at the right spot, do **^KV^QV** and the block moves to where the cursor was, the cursor jumps back to where the block was. The old cursor/block swap trick.

Finding Where to Move the Block

I also have seen experiments where permanent logical locations are marked with a specially tagged word or phrase. Then dispatching a block is done with a combination of **^QF** (FIND) procedures and the **^KV^QV** block-cursor exchange.

For example, say you put up a location marked:

"#INTRODUCTION #START #TOP #BEGINNING #HEAD"

Then you can do a find for any of those different names for the same location, such as:

^QF

FIND **#top** ↵

Options **BU** ↵ (backwards search, case immaterial)

When your cursor lights on the right spot, do:

^X^QS^KV^QV

This drops the cursor out of the permanent marker line and snaps it over to the position you want to bring the block to.

Unfortunately, the WordStar overlays are arranged so that the finding operations are on a different segment of overlays from the block marking and moving operations. If you do a block mark, a find, then a move, then go back to block marking, and find again, you will get annoying disk accesses at every turn of events as the incompatible sections of the overlay file are called up. This slows you down because the one time you shouldn't type commands as fast as you can is during



disk operations — the buffer might miss something while the computer is busy reading or writing.

Whereas with WordStar's own temporary place markers you may have to wait the very first time you make a block move. But after that, you can make as many moves as you like to designated place markers: no disk accesses.

(Caveat: This is provided the file is small enough to completely fit in memory. You can easily check if a file fits in memory by doing a series of:

^QC^QR^QC^QR

If you hear no disk access the second time you jump to the end of the file, WordStar didn't have to go to disk to get a piece of the file because the entire file is fitting in WordStar's available file buffer in memory.)

If a file is small enough to fit entirely in the memory file buffer you can re-post your place markers to new locations without the annoying disk accesses you run into with ^QF finding operations.

The Movies Reviewed

1. To sum up, marked blocks are moved (^KV) to the location of the cursor and the cursor can be brought back to where the block was (^QV) so the series (^KV^QV) is effectively a cursor/block swap.
2. You can combine that sequence with other commands to throw the cursor up as a target for block movement. You can easily throw your cursor to the top of the file (^QR), the bottom of the file (^QC) or to any designated place marker (^QN, where n represents a number from 0-9).
3. If you are going to move a block but don't know exactly where to, mark the block first before moving the cursor to reconnoiter for the destination. Then do a ^KV^QV swap when you get there.
4. With some difficulty, you can even combine finding and moving operations to post the cursor to permanent locations you have designated.

As with all WordStar operations where combined commands can be cascaded, use of a "programmable function key" facility to stream the commands at the touch of one key will make a vast improvement in efficiency. So much so that it can be said that WordStar with function keys is a whole different editor. And WordStar with function keys and the incredible speed of a RAM-disk (such as the wonderful Drive C) could be all the editor you need for a lifetime.

* * * * *

Use NSWEEP to Rid Your Disk of BAK Files

by Barton Hickman

This is in reply to your plea for more feedback from inexperienced members. I, too, am baffled by much of the esoteric stuff in the *FOGHORN* but, unlike the guy who dropped his FOG membership, I am not about to do anything so drastic.

When I can buy our own brand of top-quality disks with a lifetime guarantee for only \$15 a dozen, that alone is worth the cost of my dues. I just slowly keep learning how to run this beast and I'm sure I'll get the hang of it one of these days.

Meanwhile, I'm grateful for the nuggets that appear in your **TIPS FOR TYROS** department. I just wish there were more.

Which brings me to the point of this. I've had my Ozzie for two years now, but I use it exclusively for word processing, which may explain why I still know so little about its operation. Learning WordStar was a terrible ordeal for me but I think I've finally got it mastered, after buying half a dozen mostly worthless books about it (thank God for Arthur Naiman's *Introduction To WordStar*).

The one thing that was a constant frustration to me was cleaning up all the .BAK entries on the directory. I spent nearly two years deleting them one at a time until recently, when the president of our local user's group patiently repeated the **NSWEEP** function half a dozen times to show me how to delete all my .BAK files in one fell swoop. For the benefit of other slow learners, here's how it's done.

First you exit from WordStar and get into the system by pushing X or ^X (^ means control). (I have to do both because of a trick arrangement my guru set up for me.)

That gives you the familiar A-prompt A> up in the corner. Then you type in six letters, **NSWEEP**, and you will see a menu with all kinds of stuff you never saw before. If this is your first time like it was for me, it's a good idea to read all that unusual menu.

Next, type **L** to change drives to work disk — the same way you do it in WordStar — plus the letter for your drive, drive B probably. Then type **W** to tag the files you want to get rid of. When NSWEEP asks Tag What, reply ***.BAK** (↵ means carriage return). That command means to tag every filename that ends with .BAK. Then you type **E** for erase.

When NSWEEP asks you if you want to be prompted Y or N?, say Yes. I'm not brave enough to let mine run amok yet; you may have more courage.

Saying "yes" lets you check each erasure before it happens. It's a bit more trouble, but someday, when I'm sure nothing can go wrong, I may let NSWEEP wipe out all those annoying .BAK files with one keystroke — and you might just do it too.

[Current version — 207 — and some earlier versions have the W and E commands. Editor]

* * * * *

WordStar Timesavers

by Bernadine Z. Paulshock

Alan Chattaway, in the January, 1985 *FOGHORN* p. 21, in his *WordStar Workshop*, explained how to search to be sure pairs of start/stop commands had been issued in order to prevent all subsequent text from inadvertently being bold printed. He also explained why the same method (a search for the control characters using the option of marking every second occur-

rence) does not work for ^PS (^ means control), the underlining command. Alas, the latter is the one which most often gets me into trouble.

When I neglect to insert a stop underline command, all the rest of my manuscript is underlined. This is hard to read and slow to print. This calamity has occurred often because of a typing error in which I produced a PS instead of a ^PS. Chattaway gave me the idea of entering / after the second ^PS to allow checking for such errors.

Now, as part of tidying up my completed manuscript, I search for /, make sure it follows a ^PS meant to command the end of underlining, and then delete the / with a ^.. If I inadvertently entered a PS instead of a ^PS, the system allows me to catch that error too.

Another timesaving glitch "cleanerupper" for me is having a function key ^G^D. This changes a misprint such as tihs to ths when the cursor is placed under the first incorrect letter and the function key is pressed. After the deletion, the cursor is left in the correct position from which to insert the deleted letter back into its proper position with one key stroke.

Now I would like to acquire a set of directions to change a lower case word to UPPER CASE without deleting and retyping??

* * * * *

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ARTICLES

ZorbaNet On-Line RBBS-RCP/M Facilities

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What is a Zorba?

The Osborne 1 began the concept of taking your computer with you when you travel. The Zorba improved this concept by increasing floppy diskette storage capacity from 185K on the Osborne to 388K on the Zorba; by increasing the size of the video display from 5" x 52 columns on the Osborne to 7" x 80 column on the Zorba; and by making the unit a little easier to carry by reducing the weight from about 30 pounds (Osborne) to around 22 pounds (Zorba).

However, as with all things, sometimes there can be problems. The computer was well designed, extremely sturdy and, surprisingly enough, disk compatible with about nine other microcomputers that were available at the time the Zorba was introduced. (It is now disk compatible with about 28 computers, including the MS-DOS disk format through improvements to the COMPAT software.) This latter feature was a 'first' in the field: that of being disk compatible with systems other than it's own. This single feature caught the eye of many users who ultimately fell in love with this little machine.

With all of this going for it, what could be the problem? The producer could not produce enough of the machines to fill the orders.

A Little History

Though Telcon Industries, the producers of the Zorba, started with a strong push into the microcomputer field, their efforts to sell the smart little system fell flat after about two years in the market place. There are as many ideas on why Telcon failed in the distribution of the Zorba as there are people who where interested in the machine. One thing is obvious: there was a great demand for the machine at a time when the parts required to produce them were hard to find. Thus, it was difficult for Telcon to produce enough machines to meet demand, and when deliveries were late, buyers took their money to suppliers who could meet delivery and left Telcon with undelivered machines once production could be completed.

This has happened several times in the past few years and has been the downfall of several companies.

I personally became involved with Telcon as a retail dealer for the Zorba in Boise, Idaho in early 1982. At that time there was an abundance of Zorba machines but they were not well known. My first Zorba was delivered as a complimentary copy



from the distributor with an eye to evaluating whether it really would perform in the manner indicated by the advertising. And I must say I was extremely surprised when it not only performed as the advertising stated it would but exceeded every expectation. At that time I was a proud Osborne 1 owner so the first test was to copy disks from my Osborne computer onto the "gigantic" disks of the Zorba. With COMPAT.COM, it was a breeze. A life-long love emerged and has been alive ever since.

While I write this article, some of the important dates associated with the demise of the Zorba production are a bit vague, however it became very apparent in 1984 that the machine was not going to continue as a readily-available unit due to the persistent problems dealers were having keeping the machines in stock. Sales were ahead of production and by the time production caught up, the buyer was no longer anywhere to be found. By the time production of the machines peaked and they were easy to acquire, demand for microcomputers in general had declined and prices of all machines began to drop below profitable levels.

Osborne experienced similar problems around this same time. With this turn of events, Telcon elected to discontinue production and the balance of the stock was sold in lots to those distributors who had knowledge about Zorba's benefits.

Once Telcon backed away from Zorba, the new buyer of any of the remaining units was fairly well on his or her own. There was no dealer support as these machines were being wholesaled to end users to make room for the "new" IBMs and clones then coming onto the market. It was commonplace to pick up a very nice computer for \$500 to \$600, selling 12 to 18 months earlier at \$2495. I think that is called "going into the dumper in a hurry".

So Then What?

Being aware that there were still hundreds of Zorbas that would be sold, the price was just to tempting to pass up, Anda Lee of Tampa, Florida decided there was a need for someone or some group to help the new user of the Zorba computer. She was not interested in a "user group" as such, so she aimed her efforts at supporting the Zorba through a fairly common media at that time — the public bulletin board. Because of the universal nature of the computer, it was readily adaptable to the business of telecommunications and once she found a programmer interested in developing a program to run on the Zorba, she was in business.

I am not able here to give credit to the original programmer of the RBBS used on our boards, as this was before my time. Suffice it to say, the software is written in compiled C and was well thought out. It does an excellent job of running a very secure system. Currently, the software improvements and modifications are being done by Gary Antonoff, SysOp of ZorbaNet #3 located in Atlanta, Georgia. He has made an excellent program even better and continues to improve it as time allows.

User Supplied Support

At the current time, there are five formal ZorbaNet facilities in operation throughout the country. They are:

NAME	TELEPHONE	SYSTEM Operator	LOCATION	PROTOCOL & TIME
ZorbaNet #1	(813)885-4369	Anda Lee	Tampa, FL	24 hrs-300/1200 baud
ZorbaNet #2	(805)642-0189	Bob Weaver	Ventura, CA	24 hrs-300/1200 baud
ZorbaNet #3	(404)296-9681	Steve Antonoff	Atlanta, GA	24 hrs-300/1200 baud
ZorbaNet #4	(808)245-2080	Gene Clayton	Lihu, HA	24 hrs-300/1200 baud
ZorbaNet #5	(815)398-7397	Rick Fiduccia	Rockford, IL	not sure of this one
ZorbaNet #6	(805)644-6136	John Maclean	Ventura, CA	24 hrs-300/1200 baud

(I am not sure of the status of ZorbaNet #4 at this time.)

Anyone who needs assistance with their Zorba is invited to sign onto any one or all of these boards and make themselves at home. There are generally several active users of each board who are ready to answer your questions. Several have been involved in modifying the original BIOS to enhance further it's usefulness.

And in Hard Copy

For those Zorba users who can just not bring themselves to get on the telecommunications bandwagon, there is a Zorba Newsletter put out by the Oracle of ZEUS (Zorba Equipment Users Society). It is produced on disk and generally fills a 388K disk with information and public domain programs. It includes a MailMerge control file that allows the subscriber to automatically print the text material if they want.

The Oracle of ZEUS was started by Paul O'Nolan and Tom Hodges from Athens, Ohio and are listed in Volume One, Number One as Associate Editors. Paul still contributes often to the Oracle but it is now in the capable hands of Eric Bear who has produced the last few issues. The last issue along with the normal text and public domain files, included an update of the BIOS version 1.8b to 1.8z by Randy Brook. This came in the form of a two-disk publication and the new BIOS has some real nice features. This is one of the side benefits of being a member of an organization that is very seriously interested in supporting this fine machine.

A subscription to six issues of the Oracle of ZEUS costs \$25 and for that price, you get to keep the disks that you receive. It is well worth the investment for the public domain programs that are included in each issue. Those interested can subscribe by sending their payment to:

Oracle of ZEUS
P.O. Box 40165
San Francisco, CA 94140

I encourage everyone who has an interest in the Zorba to become a member.

Current Activity

The Zorba is now back in production under the Gemini name. Gemini is producing the original Zorba with the addition of a 9" monitor. Other than this change, it is compatible with the original machine. The local SysOp of ZorbaNet #6, John Maclean, recently purchased one of the 9" machines and he is very pleased with it's operation. They appear to have continued the tradition of quality construction.

For the latest on how this machine is holding up, log onto John's board and leave him a message: he's a very helpful fellow and would be happy to hear from you.

* * * * *

MEDIA MASTER

FORMATS SUPPORTED

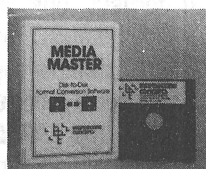
	IBM PC	ZENITH Z-100	OSBORNE 1/2/3/4/5	KAYPRO 2/3/4/5	DEC RAINBOW
Actrix (DSDD)	•	•	•	•	•
Actrix (SSDD)	•	•	•	•	•
Avatar TC10 (DSDD)	•	•	•	•	•
Casio FP 1000 (DSDD)	•	•	•	•	•
Chameleon CP/M-80	•	•	•	•	•
Columbia MPC CP/M-80	•	•	•	•	•
Cromemco C/DOS (SSDD)	•	•	•	•	•
Cromemco C/DOS (SSDD)	•	•	•	•	•
Cromemco w/Int'l Term (DSDD)	•	•	•	•	•
Cromemco w/Int'l Term (SSDD)	•	•	•	•	•
DEC Rainbow CP/M-86/80	•	•	•	•	•
DEC Rainbow MS-DOS	•	•	•	•	•
DEC Mate II CP/M (SSDD)	•	•	•	•	•
DEC VT180 (SSDD)	•	•	•	•	•
Davidge (DSDD)	•	•	•	•	•
Digilog (DSDD)	•	•	•	•	•
Epson Multifont (DSDD)	•	•	•	•	•
Epson QX-10 (DSDD)	•	•	•	•	•
Facit DTC (SSDD)	•	•	•	•	•
Fujitsu Micro 16S (DSDD)	•	•	•	•	•
Group III CP/M (DSDD)	•	•	•	•	•
Heath w/Magnolia CP/M	•	•	•	•	•
Heath/Zenith Z-DOS (1.xx DSDD)	•	•	•	•	•
Heath/Zenith Z-DOS (1.xx SSDD)	•	•	•	•	•
Heath/Zenith Z-DOS (2.xx DSDD)	•	•	•	•	•
Heath/Zenith Z-DOS (2.xx SSDD)	•	•	•	•	•
Heath/Zenith Z-DOS (2.xx SSDD)	•	•	•	•	•
Heath/Zenith Z-100 CP/M (DSDD)	•	•	•	•	•
Heath/Zenith Z-100 CP/M (SSDD)	•	•	•	•	•
Heath/Zenith Z90 40 track (1k block)	•	•	•	•	•
Heath/Zenith Z90 40 track (2k block)	•	•	•	•	•
IBM PC CP/M-86 (DSDD)	•	•	•	•	•
IBM PC CP/M-86 (SSDD)	•	•	•	•	•
IBM PC-DOS (1.xx DSDD)	•	•	•	•	•
IBM PC-DOS (1.xx SSDD)	•	•	•	•	•
IBM PC-DOS (2.xx DSDD)	•	•	•	•	•
IBM PC-DOS (2.xx SSDD)	•	•	•	•	•
IDEA Britelex (SSDD)	•	•	•	•	•
ISM CP/M (SSDD)	•	•	•	•	•
Ithaca (SSDD)	•	•	•	•	•
Insight Dev IQ-120 (SSDD)	•	•	•	•	•
Kaypro 10 (DSDD)	•	•	•	•	•
Kaypro 2 (SSDD)	•	•	•	•	•
Kaypro 4 (DSDD) *	•	•	•	•	•
LNW-80 (SSDD)	•	•	•	•	•
Lobo MAX-80 (SSDD)	•	•	•	•	•
Lobo MAX-80 512 (SSDD)	•	•	•	•	•
Micral 9050 CP/M-80 (DSDD)	•	•	•	•	•
Morrow MD11 (DSDD)	•	•	•	•	•
Morrow MD2 (SSDD)	•	•	•	•	•
Morrow MD3 (DSDD)	•	•	•	•	•
MacSym 350 (SSDD)	•	•	•	•	•
Monroe OC8820 (SSDD)	•	•	•	•	•
NCR Decision Mate 5 (DSDD)	•	•	•	•	•
NEC PC-8001A (DSDD)	•	•	•	•	•
NEC PC-8001A (SSDD)	•	•	•	•	•
Olympus ETX II (SSDD)	•	•	•	•	•
Olympia EX100 (DSDD)	•	•	•	•	•
Osborne 1 (SSDD)	•	•	•	•	•
Osborne 1 (SSDD)	•	•	•	•	•
Osborne 4 Vixen (DSDD)	•	•	•	•	•
Osborne Executive (SSDD)	•	•	•	•	•
Osborne Osmosis (SSDD)	•	•	•	•	•
Otrona (DSDD)	•	•	•	•	•
Philips 3000 (SSDD)	•	•	•	•	•
PMC Micromate (DSDD)	•	•	•	•	•
Reynolds & Reynolds (SSDD)	•	•	•	•	•
Sanyo CP/M (DSDD)	•	•	•	•	•
Superbrain (DSDD)	•	•	•	•	•
Superbrain Jr. (SSDD)	•	•	•	•	•
Systel II (SSDD)	•	•	•	•	•
Systel III (SSDD)	•	•	•	•	•
S-100 40 TRK (SSDD)	•	•	•	•	•
TI Professional CP/M-86 (DSDD)	•	•	•	•	•
TI Professional CP/M-86 (SSDD)	•	•	•	•	•
TRS-80 Model III FEC CP/M (SSDD)	•	•	•	•	•
TRS-80 Model III FEC D805 (SSDD)	•	•	•	•	•
TRS-80 Model III Hurr. Labs (SSDD)	•	•	•	•	•
TRS-80 Model III Mem. Merch. (SSDD)	•	•	•	•	•
TRS-80 Model I Omikron CP/M (SSDD)	•	•	•	•	•
TRS-80 Model IV CP/M Plus (SSDD)	•	•	•	•	•
TRS-80 Model IV Montezuma Micro (SSDD)	•	•	•	•	•
Teletex 40 track (SSDD)	•	•	•	•	•
Teletex 80 track (SSDD)	•	•	•	•	•
Toshiba T100 (DSDD)	•	•	•	•	•
Televideo TurboDOS (DSDD)	•	•	•	•	•
Televideo 802 CP/M	•	•	•	•	•
Wang Mavis CP/M (DSDD)	•	•	•	•	•
Xerox 820 II (SSDD)	•	•	•	•	•
Xerox 820 II (SSDD)	•	•	•	•	•
Zorba 40 track (DSDD) *	•	•	•	•	•

* Requires access to "foreign" computer

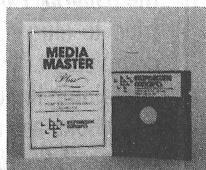
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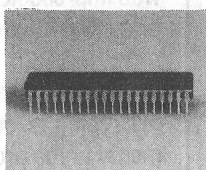
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Here are a few special characters which have been designed for the Epson and several other printers:

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You can print compressed, proportional, expanded, elite, italics, pica, and any combination your printer allows. With FLASHPRINT!! you will also have full control over superscripts and subscripts as well as true underline and control of color ribbons!

With FLASHPRINT!! you can print anything your printer is capable of producing. Enter four characters into the beginning of your file and produce a letterhead created from graphic characters. Emphasize your thoughts by mixing bold, elite, condensed, expanded, and proportional characters in a single sentence. Under-score (including the blanks between words) or underline your text while inserting boats, cars, and Greek symbols into your letter. FLASHPRINT!! makes it possible to do all of the characters and symbols shown above with only one or two keystrokes.

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CP/M version: **\$49.⁹⁵**

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BOOK REVIEWS

The MBASIC Handbook

by W. Terry Whalin

A number of public domain programs are written in MBASIC or some other variety of BASIC. Often in computer magazines (like the *FOGHORN*, *Popular Computing*, *BYTE*, etc.), programs will be listed in MBASIC. From time to time, I have tried my hand at writing a few programs and modifying others and even had limited success.

A beginning point to learn about MBASIC was Chapter 7 in the *Osborne 1 User's Reference Guide*. A number of times I have tried to slug my way through that chapter and have yet to complete it. I find it poorly written for the beginner and containing limited examples. As in other chapters of the manual, books are recommended to learn additional information. *Microsoft BASIC* by Ken Knecht (Diluthium Press) is recommended reading about MBASIC (*Osborne 1 User's Reference Guide*, p. 237 in the Blue Guide and p. 304 in the Grey Guide). I browsed through the book in a bookstore a while back and was impressed with the small size (176 pages) and expensive price (\$15.95). I have yet to read the Knecht book.

Yet MBASIC or BASIC programs keep appearing in magazines which peak my interest in trying them. I'll key them, get my typing errors debugged and then notice a few improvements to the program. It is the final step where my frustration builds — attempting to modify the program without a complete knowledge of how the MBASIC language works in the first place.

This article reviews an MBASIC book. I don't claim that it's the answer to all my problems in learning MBASIC but it is definitely a boost in the right direction. *THE MBASIC HANDBOOK* by Walter A. Ettlin and Gregory Solberg (1983) is published by Osborne/McGraw Hill (2600 Tenth Street, Berkeley, CA 94710) and costs \$17.95 plus postage. In contrast to Knecht's book, *TMH* has 457 pages. I've found the book clearly written with short program examples illustrating each point discussed. It is an ideal book for either the beginner or the more advanced user.

The book has three sections — Basic Tools (Chapters 1-10), Advanced Tools (Chapters 11-17) and Power Tools (Chapters 18-22). The introduction of each chapter lists a summary of the major content; e.g., in Chapter 2, the following commands, statements, and operators are discussed:

Commands: RUN, LIST, NEW
Statements: LET, PRINT, INPUT, END
Operators: +, -, /, *, ^

Throughout the chapters, *TMH* has good subheadings that allows the reader to quickly find information such as: Displaying Your Program [LIST] (p. 17).

Small programs appear throughout *TMH* illustrating the information in the subsections. At the end of each chapter, a tutorial is included with several longer program examples which combine the commands and principles in that chapter. Finally some exercises are included for the reader to gain practical experience with the new commands.

One major plus for the book is the exercise answers are included in Appendix D. I also have the book, *BASIC AND THE PERSONAL COMPUTER* by Thomas Dwyer and Margot Critchfield (1982 Addison-Wesley Publishing Company). I managed to learn a few things from this book working the practical exercises but the answers to the exercises were not included. *TMH* is to be commended for helping the reader be confident of getting the right answers by including the answers to the exercises.

Here is a list of the chapter titles to help you evaluate whether you could use this book:

PART I	BASIC TOOLS
Chapter 1	In the Beginning
Chapter 2	First Program
Chapter 3	Organizing Your Programs
Chapter 4	Making Decisions
Chapter 5	Editing a Program
Chapter 6	Formatting Output
Chapter 7	Working With Variables and Loops
Chapter 8	Introduction to Functions
Chapter 9	Working with String Functions
Chapter 10	Using Arrays
PART II	ADVANCED TOOLS
Chapter 11	Working with Subroutines
Chapter 12	Sorting Numbers and Strings
Chapter 13	Debugging Your Programs
Chapter 14	Working with Sequential Files
Chapter 15	Working With Random-Access Files
Chapter 16	Using Boolean Operators
Chapter 17	Defining Your Own Functions
PART III	POWER TOOLS
Chapter 18	Programming With Software Tools
Chapter 19	Menu Driver
Chapter 20	Payroll
Chapter 21	Mailing Labels
Chapter 22	User Documentation
PART IV	APPENDICES
Appendix A	Format of Commands, Statements, and Functions
Appendix B	Error Codes and Messages
Appendix C	ASCII Codes
Appendix D	Answers to Exercises

I mentioned in the opening paragraphs that I am consistently amazed at how the inner workings of the language are explained simply and understandably in *TMH*. I learn new things in almost every subsection. I am not finished reading it;

as with any computer book, I find *TMH* can't be read quickly as light fiction but slowly absorbed in bits and pieces. But I have read further with greater understanding in *TMH* than any other computer book I've attempted (which is around six or seven to date).

All the programs in the tutorial section are available only on 8", single density, IBM format and 5-1/4" NorthStar double density. If these programs were available in more varied formats, e.g. Osborne 5-1/4", it would be more practical and I've also found a few obvious mistakes in the exercise answer section. Makes me wonder if there are other mistakes I am missing.

* * * * *

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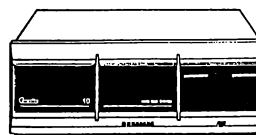
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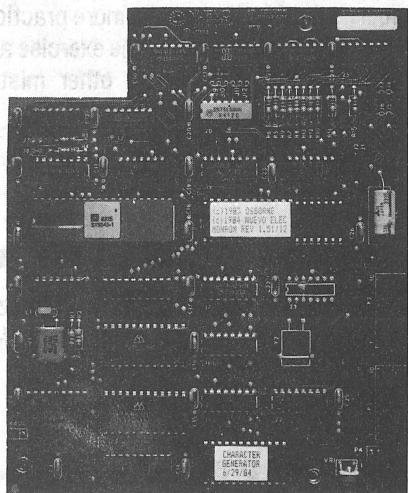
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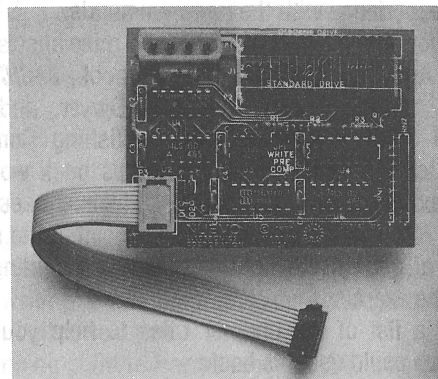


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Both ESU's will handle a third floppy disk drive that can

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NEC 8000 DD	TRS80 IV DD	LOBO MAX80 DD
NEC 8001A DD	OKI if 800 DD	XEROX 820 DD

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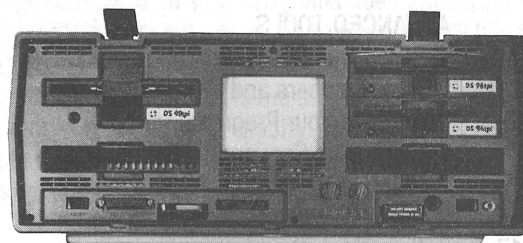
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(\$445 if you already own a *Nuevo* Double Density Upgrade)

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(Includes 50 watt replacement power supply for O-1 plus a cooling fan)

Model IN4	(DS/48tpi 386K)	\$150.00
Model IN9	(DS/96tpi 782K)	\$200.00



be either 48 or 96tpi. All standard software will run without modification. File transfer utilities included with the ESU's will allow your O-1 to read, write and format over 40 different computer formats, including IBM PC DOS 1 & 2, both SS/DD & DS/DD. The *Nuevo* BIOS that's supplied with the double-sided upgrades automatically differentiates between 48tpi and 96tpi disks, both SS and DS, and will automatically recognize, read and write the following disk formats:

DOUBLE SIDED FORMATS SUPPORTED

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NELMA PERSONA DD	EPSON QX-10	HP-125 (CP/M86)
KAYPRO II DD	HEATH Z100	TELEVIDEO 803
DEC VT180 DD	NEC 8801A	NUEVO 96TPI (4x4 only)

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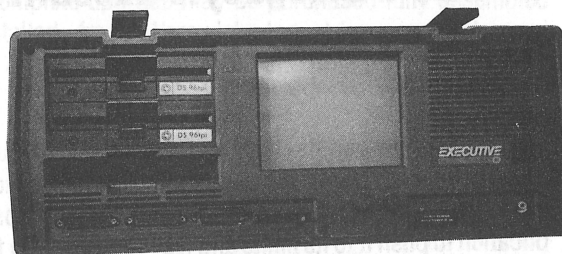
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In addition to doubling (or quadrupling) the disk storage space, the Nuevo ESU's for the Executive include the following features as STANDARD:

- ★ **Expandable to Four Floppy Disk Drives**
The Executive ESU's can address up to two additional external disk drives, in any combination of 48, 96, or 100tpi, in any combination of 3½, 5¼, or 8" drives.
- ★ **Foreign Disk Handling**
The ESU Executive reads, writes and formats over 40 different computer formats, including IBM PC DOS 1 & 2, both SS and DS. The new BIOS recognizes *automatically* all of the following plus even more:

SS FORMATS

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Heath Magnolia DD
Heath Z90 DD
IBM CP/M86 DD
Kaypro II DD
Lobo Max80 DD

NEC8000 DD
NEC8001A DD
Nelma Persona DD
OKI ii 800 DD
Osborne One SD&DD
Osborne Exec DD

TI Pro CP/M86 DD
TRS80 I SD
TRS80 III DD
TRS80 IV DD
Xerox 820 SD
Xerox 820 DD

- ★ **8Mhz Z-80**
The Executive runs with twice the speed of the original factory 4 Mhz processor!
- ★ **3msec Drive Step Rate.**
- ★ **256K of High Speed Dynamic RAM**
More memory for CP/M file buffering!
- ★ **Upgradable to 2 Megabytes of Memory!**
(Pending availability of new RAM's from manufacturers). The multifunction board is socketed for the next generation 1 Megabit X 1 RAMS.

DS FORMATS

Altos 580 DS/DD (96 tpi)
Ampro Little Board (96tpi)
Cromemco CP/M80
Epson QX-10
Heath Z100
HP-125 (CP/M86)

NEC8801A
Nuevo 0-1 2X2
Nuevo 0-1 4X4 (96tpi)
Osborne Vixen
Sanyo
Televideo 803

THE EXECUTIVE 2X2 \$595.00

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Use as *fast* 298K RAM disk with a two drive system or for file buffering with three of four drive system. \$40
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The multifunction board (MFB) component of the Executive ESU's is available as a separate item. As such it comes without disk drives and without the double-sided drive and 8" drive capabilities. The 8 Mhz CPU and 512K of high speed RAM, of which 388K can be RAM disk, are standard. The Clock, EEPROM and Math Processor are optional. It is upgradable later to a full ESU.

THE EXECUTIVE 4X4 \$695.00

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The 1/2 Megabyte Executive: A Home Brew Upgrade *by Don Rowe*

There may never be such a thing as a computer with "enough" memory and disk space. Every time a more powerful system comes along, somebody else develops an application to push it to its limits and leave you wishing for more.

A few months ago, I began considering disk drives with greater capacity, including eight-inch drives and hard disks. As I pondered my primary requirements, I decided that what I needed was not permanent disk storage capacity so much as working storage. It wasn't really important that my programs were spread out among several floppy disks; my problem was finding a way to load everything into the computer at one time and work with it easily. Hard disks contain plenty of room and temporary working files can be handled quickly, but internal hard disks are not cheap and are somewhat vulnerable if the computer is carried around much.

What I really wanted was a substantial RAM-disk, which allowed a large chunk of memory to be used just like a disk drive. RAM-disks have the additional advantage of being extremely fast.

After studying the inner workings of my Executive a bit, I found that the modifications necessary to upgrade the standard 128K of memory to a half megabyte were not very difficult, and I could possibly upgrade to a full megabyte later. The rapidly falling price of 256K memory chips made the notion even more irresistible. I could purchase a half megabyte for about the same price I once paid for 16K for my trusty old TRS-80 model I.

As this article is written, the parts are available for under \$65, and prices are still falling.

An upgrade of this type requires two major changes: a hardware upgrade, which requires replacing the original 64K memory chips with 256K chips and modifying the supporting circuitry, and new software to allow CP/M to access the extra memory. Fortunately, the Executive was designed to support more than the standard 128K; many of the design problems were at least partially solved.

As I considered further, I realized that with a sneaky circuit design and some fancy software, I could have much more than just a RAM disk. The final upgrade divides the 512K memory space into four 128K program banks; I can load up to four programs at one time and switch instantly between them, and any memory not used for programs is available for use as a RAM disk. To the best of my knowledge, this capability is not available on any CP/M 80 or CP/M Plus based computer. This is not true concurrent processing, but it does give the Executive

many of the same capabilities as an IBM computer with Topview and Sidekick, or a Macintosh with Switcher.

I can load SuperCalc and WordStar for instance, switch between them with a single key command and even copy information from one to the other. This program switching capability is also handy when I want to return to CP/M briefly from within another program. I can put my main program "on hold" and return to CP/M. After doing whatever needs to be done, another key command returns me to my first program, ready to continue exactly where I left off. By loading WordStar into two program banks at once, I can switch instantly between two text files which is ideal for making comparisons, and the RAM disk makes block copies from one file to another a snap.

A friend of mine who also has this upgrade writes programs which are too large to fit into a standard Executive. Previously, he had to divide it into several smaller programs, loading each as it was needed. Now, he simply loads each portion into a different program bank and the small programs transfer control to each other as needed. The procedure is similar to a subroutine call except that any one program can directly access only its own program bank. It is possible however to copy portions of one program bank into any other, allowing the individual programs to share data.

I decided to put most of the software for controlling the extra memory into an EPROM (Erasable Programmable Read Only Memory). This means that it is permanently stored inside the computer so there is no need to load it each time the computer is turned on. It also means that I don't need much disk space for startup programs and needn't go through lengthy initialization routines. After all the necessary programming was done, I still had some room left in the EPROM which I didn't want to go to waste so I decided to improve the function keys and make a few other enhancements.

The function keys can be programmed at any time, even in the middle of another program, and there is an edit function which allows changing, inserting or deleting characters anywhere in the function key string. Function keys may even be nested, allowing one function key to include others. A special command will pause in the middle of a function key string to accept input from the keyboard and another command sends characters directly to the console. This allows displaying prompts or comments; setting video, keyboard or cursor attributes; and even switching between programs from the function keys.

Since there are so many possibilities, it was only natural to increase the number of function keys. I now have four sets of 20 function and arrow keys which can be switched easily or loaded from a disk file.

To further enhance the program switching feature, I included a command to copy information from the screen of one program directly into another program as well as the ability to print any portion of the screen. I can, for instance, copy a few SuperCalc cells or a dBASE record directly into a WordStar file, which provides a limited form of do-it-yourself software integration. There is also an abort key which returns to CP/M from within almost any program, even if it does not respond to

its usual keyboard command to exit.

I also have upgraded to double sided disk drives and have located some public domain utilities which are especially valuable in a program switching environment. I now have a 6K full screen text processor which is ideal for jotting down notes while in the midst of another program, two calculators and a keyboard definition program to alter any of the control keys.

I did have to make a few compromises. The IEEE-488 routines and the parallel port input routine were removed to create a little extra room. Also the Executive no longer supports as many different disk formats as before. If you don't know what all this means, don't worry about it. These features are only used in special cases and each can still be handled in a different way.

The new EPROM is fully compatible with the standard Executive memory board and disk drives. It is possible to install only the EPROM, adding the enhanced function keys, screen copy and screen print features to any Executive. Double sided disk drives may be added at any time by simply changing the disk controller chip and disk drives. The specially-modified memory board is required only for the program switching and RAM-disk.

The full details of this upgrade are a bit much to present in the **FOGHORN**. If you have specific questions, feel free to write, but please enclose an SASE. My address is:

4052 Oregon St. #2
San Diego, CA 92104
(619) 299-4536

The complete upgrade may be purchased fully assembled and installed from Worswick Industries, an authorized Osborne dealer. Complete details and prices are available on request.

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Suite J
San Diego, CA 92111
(619) 571-5400

This upgrade is not the ultimate solution for every problem, but it does provide enhancements previously available only on much more expensive computers. Now if I only had a full megabyte of memory and high resolution bit-mapped graphics. . .

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Drive C: Another Look

by Peter H. Davis

In 1984, there were four reviews of Drive C in *FOGHORN* (Vol. III, #7 April, p. 31; #10 July, p. 20; #11 August, p. 26; and #12 September, p. 37). These reviews helped me decide to make my first major hardware purchase since I bought my Tan Case O-1 in June 1982.

Since receiving and using the Drive C package, I have found some things that were not covered in the reviews that I read. So the following information may help other FOG members decide if the Drive C is for them.

The point that pushed me into spending my hard-earned dollars was the offer of a discount by buying a second O-1 at a very reduced price (compared with my original purchase) along with the Drive C.

I felt that I had two choices; either throw out all the software that I had purchased and written, and change to an IBM or IBM-compatible or totally commit to the Osborne. If I was to stay with the Osborne, then I had to have a backup system in case my computer ran into problems needing spare parts that might be hard to find.

Also with two computers, I would have less fear of taking one to work or on trips and knowing that I would not have to compete with my kids for computer time was also attractive.

Having decided to make the commitment to Osborne, Drive C would offer many advantages: no more waiting to prepare a document while the first one was printing, and Drive C has a print buffer that will, after a few seconds, free up the computer to prepare the next file while printing is going on.

(One word of caution here: watch the screen; every now and then Drive C will take over the computer while printing to feed the printer from buffer. During this time, you may lose a key stroke or two and mess up what you are working on.)

I bought a computer for the speed of doing things but after a year or so, what seemed like lightning speed when I started, now appeared full of delays. Drive C is a RAM-disk, therefore, programs like WordStar and SuperCalc treat the disk with the speed of memory. What this means is, in WordStar, when you give a command such as ^QC (control QC: jump to end of file), you will be there right away, not several seconds later as you would have done with standard Osborne drives. Saves and menu checks are done in nothing flat. All in all, by investing about 60 seconds at the start of the session to send the software to Drive C using control keys, I can save about 30 per cent of the time I used to spend at the computer.

I will not discuss the installation — there is nothing to it — and it has been covered in the other reviews. The documentation is fine for a beginner but too detailed for someone who has used their computer for a while (but better too much, than too little).

The price of the smallest Drive C (192K) is, as of this writing, \$329. The documentation and one of the reviews tell you that Drive C will only work with the printer turned on. If this is a problem disconnect the printer cable at the printer and Drive C will be happy. Another tip for Drive C owners is archive only

your software program and supporting programs and save your data to drives A or B.

The company is very helpful with problems. I received a dud ManyKey program that I ordered from them, and they sent me a new one before they even received my old one. My Drive C needed a little tuning to work my Zenith monitor, and they took care of this in about a week. The Drive C Company, now called WestWind Computer has an 800 number which brings immediate help. *[A Westwind advertisement appears in this issue.]*

The main problem I found with the firm is that they advertise items that are either not in stock or haven't completed development. When I ordered the new O-1 and Drive C, the O-1 arrived in a few days but the Drive C had to be back ordered for a month. When they advertised their great, new SuperSize SuperCalc2 spreadsheet, it was months before it was delivered. (However the delay in shipping the Drive C meant I qualified for the free SuperSize spreadsheet. Had they shipped on time, I would have missed out on this great tool.)

The SuperSize SuperCalc2 spreadsheet is a great boon for anyone who has received a horrid "Out of Memory" error message after hours of working. The only problem that I have found with it is that it is a little slower with the "Protect" and "Calculate" commands but I am willing to trade a little speed for all that extra K of memory, and with my Drive C, commands still are executed much faster than with standard drives. Another extra is that for those O-1 owners who did not upgrade to SuperCalc2, you now get that upgrade free.

All in all, if you bought an Osborne over an Apple, you bought it to have a computer, not a game machine. You bought it for speed and probably for business-related use. The Drive C will give you much more speed if you plan to spend more than a few minutes using it per boot and if you print a lot, it is a must. At \$329 — even if your time is worth only \$5 an hour — you will pay for the Drive C in 200 hours. Then everything else is profit.

I would also recommend that you consider a second computer. I know that it was worthwhile for me.

* * * * *

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SOFTWARE REVIEWS

A Reference Guide to DU (Disk Utility)

by Kelly Smith

This article first appeared as *A Reference Guide to DU (Disk Utility)* in the *User's Guide* magazine, Vol. 1, No. 4 June 1983 (pages 53-63) by Kelly Smith (TUG Contributing Editor). It has been adapted from the original program and documentation by Ward Christensen, prolific contributor to the world of public domain CP/M software. DU is a famous disk fixer from the public domain libraries.

For more information on this article and others like it, contact:

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Introduction

DU is a comprehensive "disk diddler" utility that allows a user to examine and modify ANY portion of a CP/M-80 (Version 2.0 or greater) disk at the "byte level". An On-Line Help facility is included (just press the ? key followed by ↵, ↵ is the carriage return key) should you forget the extensive command set (typically single keyboard entries, terminated with a RETURN key).

A word of caution to the novice user... it is possible to DU a disk to death! That is, casual modification of portions of the CP/M-80 operating system data tracks is usually destructive to the proper operation of the "copy" of CP/M on the modified disk.

Use particular care when writing your modifications back to disk!

DU is an invaluable tool for recovering "bombed directories", modifying CP/M "run time" parameters, even making a "backup" of your disk directory and preserving it someplace in reserve on your disk. The possibilities are NOT LIMITED by DU!

The best part is that it was provided FREE to the public domain (may be freely used and given away) by Ward Christensen, and even includes source code for your detailed examination and/or customization. (However, when customizing public domain software, you are on your own. Don't expect "hand-holding" from the original author when you "write on their wall"!).

So before you go out and BUY a functionally-identical software package (Gads! I would love to name names!!!), take a look at DU first. You won't find a better program for the money!

Thank you again Ward, for yet another major contribution to the CP/M software user community! So without further ado, here is your User's Guide to DU (poetic!):

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- 1.0 Installation
- 2.0 Usage
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 - 5.2 Modifying a Disk for "Program Autoload"
 - 5.3 Finding and Modifying Program Data Quickly
 - 5.4 A "Poor Mans" Disk Test

1.0 Installation

Versions 7.0 and later of DU (Disk Utility) are designed to be installed with a minimum of trouble. In fact, in almost all cases, no changes to the source file should be necessary to get DU up and running. Yes, 8080 source code is available from various RCP/M systems as well as directly from the FOG library.

The only requirement for using DU is that you must be running in a CP/M-80 operating system environment of "vintage" 2.0 (or greater). This is because DU uses the disk parameter block incorporated in the latest releases of Digital Research's CP/M-80 to determine the characteristics of the disk environment. Note also, that earlier versions of DU supported only the standard eight inch "distribution standard" IBM 3740-type diskette running CP/M-80 version 1.4 and, in some cases, did not work for certain "non-standard" versions of CP/M-80 (i.e., CDOS from Cromemco, and some implementations of CP/M-80 from Lifeboat Associates).

The only parameter that you might need to change will be the CPU clock speed flag at address 103H (when DU is loaded into system memory). Leave this byte zero if you have a 2 MHz clock. Patch it non-zero (change the address content to 0FFH) for 4 MHz (refer to your Digital Research DDT [Dynamic Debugging Tool] documentation if you are unfamiliar with modifying program files and patching techniques). This is only needed for the Z(sleep) command. An alternative is to use larger numbers when running DU with a computer system clock rate of 4MHz or greater.

2.0 Usage

An initial command string may optionally be placed as an operand of the DU command at the CP/M system user command level, i.e.:

A) DU G0;D;G2;=OK<D><A><1A>;D↵

For example, if you want to only "MAP" the disk and then exit, you would enter at your console keyboard:

A> DU M:X ↵

The DU program would then respond with the diskette "MAP" (actually a display of the diskette Group Allocations), as shown in the following example MAP of a CompuPro 8/16 System diskette:

DISK UTILITY ver 7.7

Universal Version

Type ? for help

Type X to exit

```
0004-0005 00 COPY .COM 00 : 0006-000D 00 WS .COM 00
000E-0010 00 DDT .COM 00 : 0011-0018 00 FMTMEM .COM 00
0019-001A 00 FORMAT .COM 00 : 001B-001B 00 CONV .COM 00
001C-001C 00 CRCK .COM 00 : 001D-001D 00 CROSSREF .COM 00
001E-001E 00 D .COM 00 : 001F-0021 00 DU .TXT 00
0022-0025 00 PIP .COM 00 : 0026-0026 00 XDIR .COM 00
0027-0027 00 FILE-XT2 .COM 00 : 0028-002E 00 RMAC .COM 00
002F-0033 00 LINK .COM 00 : 0034-0034 00 EXEC .COM 00
0035-0035 00 SYSGEN .COM 00 : 0036-0036 00 FMAP .COM 00
```

The diskette MAP shown here is "edited" for brevity!

```
-- Group Allocation Number
-- Filename
-- Filetype
-- Extent Number
-- User Number

020F-020F 00 PBIOS .ASM 03 : 0210-0216 01 ALIENS .COM 00
0217-0218 00 PBIOS .ASM 03 : 0219-0219 00 MOVCPM .COM 00
021A-021A 00 MNTR .DOC 00 : 021B-021C 00 PRNT .DOC 00
021D-0220 00 REQD-SW .DOC 00 : 0221-0228 00 SW-DEF .TXT 00
0229-0230 00 SW-DEF .TXT 01 : 0231-0238 00 SW-DEF .TXT 02
0239-023E 00 MOVCPM .COM 00 : 023F-0241 00 FORMAT .ASM 00
0242-0242 00 FORMAT .ASM 01 : 0243-0247 ++FREE++
0248-024B 00 PBIOS .ASM 04 : 024C-0253 00 SETATR .ASM 00
0254-0254 00 PBIOS .ASM 04 : 0255-0257 ++FREE++
```

G=0000:00, T=4, S=1, PS=0

A>

Once DU is running, it will display the character ":" as the command level prompt and expects single-letter commands much like DDT. For ease of use, multiple commands may be placed on one line, separated by ";". In addition, a given command or string of commands may be repeated, either indefinitely (until ^C (control-C) is pressed), or a given number of times.

To avoid an accidental ^C from dropping out of DU, only an explicit X command will exit DU.

2.1 Commands, by Function (Quick Reference)

Help

? Request help. Example:

:? ↵

Operands in brackets [...] are optional

Numeric values: n are decimal, x hex

+ [n] step in [n] sectors;

-[n] step out [n] sectors
print disk parameters for curr drive.
= xxx search for ASCII xxx from curr sector.
(Caution: upper/lower case matters.)

Use <xx> for hex:

To find IN 0 use: =<db><0> or (tab)H,0↵(LF) use:
=<9>H,0<D><A>

< save current sector into memory buff

> restore saved sector

? give help

A[ff,tt] ASCII dump

(Type any character to continue)↵

C Change:

CHaddr,byte,byte... (hex)

or

CAaddr,data... (ASCII)

<xx> Allowed for imbedded hex.

or

CHfrom-thru,byte e.g. ch0-7f,e5

or

CAfrom-thru,byte

D[ff,tt] Dump (hex + ASCII)

Fn.t Find file

Gnn CP/M Allocation Group nn

H[ff,tt] hex dump

L Log in drive

Lx Log in drive x

M[nn] Map [from group nn]

(Type any character to continue)↵

N New Character

P Toggle printer switch

Q Quiet mode (no msgs)

R Read current sector

Snn Sector nn

Tnn Track nn

Unn Set User nn for Find command (CP/M-2 only)

V[nn] View [nn] ASCII sectors

W Write current sector

X Exit program

Y Yank current sector into sequential memory

Z[nn] Sleep [nn tenths]

/[nn] Repeat [nn (decimal) times]

(Type any character to continue)↵

Cancel a function with C or ^C.

Suspend output with S or ^S.

Separate commands with ;.

Example: g0+;d;z#20;/ would step in, dump, sleep 2 sec, and repeat until ^C typed.

All nn usage except / T, and S are HEX. Use #nn for decimal.

See DU.DOC for complete examples.



Use < to reset, or >> to sequentially retrieve the buffers, such as to move several sectors from one place on disk to another, or to another disk, or just to memory (stored at 2000H where DDT can be used to subsequently access them). =string ASCII search, starting at current sector. <xx> hex may be imbedded, or used alone: To find "IN OFEH": =<db><fe>↵

[Note: ignores bit 7 unless <xx> is used.]

Since ; is a command delimiter, you have to use <3B> to search for a ;. Also, since < is a hex-escape character, use << to mean a single <. Also note that the special symbol @ contains the displacement at which the match occurred. It may thus be subsequently used in a C command, as in:

=LIX;CA@.LXI;W↵

would search for the string LIX, change it to an LXI, and write it back.

> Gets saved buffer. < and > may be used to move a sector to another place.
>> Restore "oldest" unrestored sector saved by << command. This command may be "buried" in the middle of an infinite repeat /, because it will stop operating when there are no more sectors in the buffer.

? Gives command summary.

A Dump sector, ASCII only.

CHaddr,val,val,val Change hexadecimal in sector.

CAaddr,char string Change ASCII in sector. <xx> may be hex imbedded in the ASCII:
ca0,0K<d><a><1a>

[Note: use W to write changes to disk. The C "echoes" overlaid data for verification.]

CHaddr-addr,byte

CAaddr-addr,byte Repeats a change.

D Dump sector, hexadecimal and ASCII.

Fname Print directory for file "name", then positions to its directory sector.

F Find next occurrence of name in the directory.

Gnn Position to group nn and read.

G Shows current position.

H Dump sector, hexadecimal only.

L Re-logs in the current disk. You may pull out a disk, put in a new, and "L" just to log it in. (See "LOGGING IN DISK" in NOTES below)

Lx Logs in disk x, such as: LB↵

M Dumps a map of the group allocations for files.

Mn Shows which file is allocated to group n.

N Resets CP/M via the BDOS. This may make it possible under some implementations of CP/M to change the disk format (e.g., density, sides, etc).

P Toggle printer switch on/off.

Q Quiet: Preceding any command, suppresses console output.

R Reads the sector currently positioned to into memory. [Note: R (Read) is implicit in the G, +, and - commands, but NOT in the S and T commands.]

Snn Position to sector nn, and read.

Tnn Seek to track nn (no read).

Ux Logs user x for next F command. Displays the character ? error if not CP/M-80 version 2.0 (or greater).

V Views the current sector (assumes ASCII data).

Vnn Views nn sectors.

W Write back the current sector. [Note: may not be used after an F command, as CP/M was used to find the file in the directory.]

X Exit back to CP/M (Must press return).

Z Sleep — causes the program to pause, such as to look at a dump. Z is 1 second. Znn is nn tenths of a second on a 2 MHz 8080 CPU.

3.0 Usage Notes

3.1 Multiple Commands:

May be separated by ;. Example: the following commands will erase the B: disk directory to all E5s:

lb↵ Log-in (select) drive B.

g0↵ Position to the start of the directory.

ch0-7f,e5↵ Fill with the value E5 hexadecimal.

<↵ Save the sector

>;w;+;/16↵ Restore, write, next repeat 16 times.

This could be shortened to:

lb;g0;ch0-7f,e5;<↵

>;w;+;/16↵

3.2 Dump Commands:

All dump commands (D, A, H) may be optionally followed by a starting and ending address:

D0,7F↵ ... is the same as just D↵

D3,5↵

A20,3F↵

3.3 Logging in Disk

Some problems may arise when logging-in diskettes with mixed-density (i.e., Track 00 is single density and the directory tracks are double density, ala IBM System 34-type disks). A solution is to log in a disk which is OK, and is the same density as the disk that you want to examine and alter, then put in the new disk WITHOUT logging it in.

However, you are now opening yourself up to possible problems because of the buffering of physical sectors in the BIOS. The best technique — but not guaranteed — would be to seek to the unused inner tracks of the first disk, do the read, THEN change disks. That way if it writes anything, you won't have destroyed anything ... assuming the disk is not completely full. Another technique, which assumes that the second disk does not contain a CP/M system, would be to seek to Track 1, then do the read there, and then change disks to the new one.

3.4 Sector Buffers (The << and >> Commands)

Up to 255 sectors (only because it is a 1 byte counter) may be saved by <<. ANY TIME < is executed, the buffers are



When I went to read this file, it tried to access group 3938, with resultant angry exclamations from the disk stepper as it attempted to go south to Peoria for the data.

5.0 DU Usage Examples

5.1 Erased Program Recovery

Let's suppose that you have just put the "final touches" to your "latestngreatest" program to market as your new "let's get poor quick" scheme. You (of course) have NEVER made a backup copy after having put in 10¹⁶ (that's 10 to the 16th power!) weekends of time into it. So you proudly examine the directory of your pride-and-joy:

A0> dir B:

```
B: BIZ-INIT BAS : BIZ-CALC BAS : BIZ-CHRT BAS : BIZ-WIZ TXT
B: BIZ-WIZ BAS
```

Yep . . . all there, and . . . (ring, ring . . . it's the #%&"" + phone again!). OK, be back in a few minutes and get a printer listing for posterity. (Tick, tick . . . minutes turn to hours.)

Ah yes, let's see; where was I? Oh yes: that guy called and wanted to modem over his latest version of FOOBAR. Fine, better make some room on this "scratch disk" in drive B. So we:

```
A> era b:*. *      (let's just get rid of whatever junk is there.)
ALL (Y/N)? y      (Sure, if I can't remember what's there, it
                  can't be important!
A> dir B:          (And just to be sure . . .)
NO FILE           (Yep! No files left . . . but . . . AAaarrgghh!
                  The wrong $& + #* disk!!!)
```

What do you do??? What do you do???

Do you . . . D'You . . . Ahh Hah! DU! Disk Utility to the rescue! I just KNEW something clever would (eventually) emerge from my beer-fogged brain to save my ASCII. So here I go!

A0> du ↵

```
DISK UTILITY ver 7.7
Universal Version
Type ? for help
Type X to exit
```

:lb ↵ ("log" disk B: (forest reclamation project!))

:g0:d ↵ (Go to Group 0 (always the directory group) and Dump:

G=00:00, T=2, S=1, PS=1

```
00 E542495A 2D494E49 54424153 0000001C *eBIZ-INITBAS....*
10 02030405 00000000 00000000 00000000 *.....!''#%&()*
20 E542495A 2D43414C 43424153 00000050 *eBIZ-CALCBAS...P*
30 06070809 0A0B0C0D 0E0F0000 00000000 *.....*
40 E542495A 2D434852 54424153 00000019 *eBIZ-CHRTBAS....*
50 10111213 00000000 00000000 00000000 *.....*
60 E542495A 2D57495A 20545854 00000029 *eBIZ-WIZ TXT...)
70 14151617 18190000 00000000 00000000 *.....*
```

Hmmm . . . They're my files; the ones with funny little 0's in front of them. Let's also look at the next directory sector:

:+:d ↵ (advance + 1 sector and Dump it also)

G=00:01, T=2, S=2, PS=7

```
00 E542495A 2D57495A 20424153 00000080 *eBIZ-WIZ BAS....*
10 1A1B1C1D 1E1F2021 22232425 26272829 *.....!''#%&()*
20 E542495A 2D57495A 20424153 0100006B *eBIZ-WIZ BAS...k*
30 2A2B2C2D 2E2F3031 32333435 36370000 **+,./01234567..*
40 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
50 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
60 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
70 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
```

Well, it's all there in the directory. Let's back up one sector and start fixing things up to recover those erased files:

:-↵ (minus 1 sector)

G=00:00, T=2, S=1, PS=1

:ch0,0;ch20,0;ch40,0;ch60,0 ↵ (CHange all "E5s" to zeros)

E5E5E5E5 (the "E5s" (erased file flags) evaporate before our very eyes!

:d ↵ (Dump it just to check)

```
00 0042495A 2D494E49 54424153 0000001C *.BIZ-INITBAS....*
10 02030405 00000000 00000000 00000000 *.....*
20 0042495A 2D43414C 43424153 00000050 *.BIZ-CALCBAS...P*
30 06070809 0A0B0C0D 0E0F0000 00000000 *.....*
40 0042495A 2D434852 54424153 00000019 *.BIZ-CHRTBAS....*
50 10111213 00000000 00000000 00000000 *.....*
60 0042495A 2D57495A 20545854 00000029 *.BIZ-WIZ TXT...)
70 14151617 18190000 00000000 00000000 *.....*
```

:w ↵ (Write this directory sector back to the disk)

:+↵ (advance to the next directory sector)

G=00:01, T=2, S=2, PS=7

:d ↵ (Dump it also, to be sure)

```
00 E542495A 2D57495A 20424153 00000080 *eBIZ-WIZ BAS....*
10 1A1B1C1D 1E1F2021 22232425 26272829 *.....!''#%&()*
20 E542495A 2D57495A 20424153 0100006B *eBIZ-WIZ BAS...k*
30 2A2B2C2D 2E2F3031 32333435 36370000 **+,./01234567..*
40 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
50 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
60 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
70 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
```

:ch0,0;ch20,0 ↵ (just CHange for the two directory entries)

E5E5

:d ↵ (to be sure)

```
00 0042495A 2D57495A 20424153 00000080 *.BIZ-WIZ BAS....*
10 1A1B1C1D 1E1F2021 22232425 26272829 *.....!''#%&()*
20 0042495A 2D57495A 20424153 0100006B *.BIZ-WIZ BAS...k*
30 2A2B2C2D 2E2F3031 32333435 36370000 **+,./01234567..*
40 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
50 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
60 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
70 E5E5E5E5 E5E5E5E5 E5E5E5E5 E5E5E5E5 *eeeeeeeeeeeeeeee*
```

:w ↵ (Write this directory sector as well, before we quit!)

:x ↵ (eXit to CP/M-80)



A0> dlr b:⤵ (and as if by magic)

B: BIZ-INIT BAS : BIZ-CALC BAS : BIZ-CHRT BAS : BIZ-WIZ TXT

B: BIZ-WIZ BAS

A0> It's all done with mirrors!

5.2 Modifying a Disk for "Program Autoload"

By modifying a portion of the CP/M operating system, you can force it to load automatically and execute a command file. This can be particularly useful if you want to setup some fancy printer initialization, modify some serial port Baud rate or data format parameters, etc. To enter an "autoload" filename to a CP/M diskette:

:t2:s1:d⤵ (position to Track 2, Sector 1, and Dump)

T=2, S=1, PS=0 [NOTE: this is representative of my disk only!]

T=2, S=1, PS=0

```
00 C35CDDC3 58DD7F00 20202020 20202020 *C\[CX].. *
10 20202020 20202020 434F5059 52494748 * COPYRIGH*
20 54202843 29203139 37392C20 44494749 *T (C) 1979, DIGI*
30 54414C20 52455345 41524348 20200000 *TAL RESEARCH ..*
40 00000000 00000000 00000000 00000000 *.....*
50 00000000 00000000 00000000 00000000 *.....*
60 00000000 00000000 00000000 00000000 *.....*
70 00000000 00000000 00000000 00000000 *.....*
```

:ca8,SIGNON<0>⤵ (Change ASCII, address 8 to SIGNON and 0.

:ch7,6⤵ (Change Hex, address 7 to a value of 6 (length byte)

00 (what the value "was" prior to the change

:d⤵ (Dump the disk sector for display

```
00 C35CDDC3 58DD7F06 5349474E 4F4E0020 *C\[CX]..SIGNON. *
10 20202020 20202020 434F5059 52494748 * COPYRIGH*
20 54202843 29203139 37392C20 44494749 *T (C) 1979, DIGI*
30 54414C20 52455345 41524348 20200000 *TAL RESEARCH ..*
40 00000000 00000000 00000000 00000000 *.....*
50 00000000 00000000 00000000 00000000 *.....*
60 00000000 00000000 00000000 00000000 *.....*
70 00000000 00000000 00000000 00000000 *.....*
```

:w⤵ (Write the disk sector.)

:x⤵ (eXit to CP/M.)

You could now "cold boot" this CP/M-80 system disk, and it would "autoload" by running the SIGNON program prior to doing anything else.

5.3 Finding and Modifying Program Data Quickly

This example show how to find a filename in the directory, then locate the data within the file for subsequent modification (in this case just to change a version number in the source code, we could (I suppose) have used ED!):

:fSYSTOSYS.ASM⤵ (Find the program SYSTOSYS.ASM)

```
20 00535953 544F5359 5341534D 00000080 *.SYSTOSYSASM...*
30 0E010F01 10011401 15011601 4F015001 *.....O.P.*
G=0000:00, T=4, S=1, PS=0
```

:g10e⤵ (Go to Group 10E (see it above at address 30 and 31? Also:

G=010E:00, T=71, S=33, PS=32 (remember to enter 2K groups "bas-akwards" from what you see. In this case NOT E01!)

:d⤵ (Dump it)

```
00 3B202020 20202020 20202020 20202020 *; *
10 436F6D70 7570726F 20382F31 3620436F *CompuPro 8/16 Co*
20 6D706174 69626C65 20535953 544F5359 *mpatible SYSTOSY*
30 53205665 7273696F 6E20312E 340D0A3B *S Version 1.4...;
40 20202020 20202020 20202020 20202043 * C*
50 6F707972 69676874 20284329 20313938 *opyright (C) 198*
60 312C2031 3938322C 20313938 33206279 *1, 1982, 1983 by*
70 204B656C 6C792053 6D697468 0D0A3B0D * Kelly Smith...;*
```

:ca3c,5⤵ (I want to change from version 1.4 to 1.5)

:d⤵ (what sound does the Lone Rangers horse make? (DumptadaDumptada...)

```
00 3B202020 20202020 20202020 20202020 *; *
10 436F6D70 7570726F 20382F31 3620436F *CompuPro 8/16 Co*
20 6D706174 69626C65 20535953 544F5359 *mpatible SYSTOSY*
30 53205665 7273696F 6E20312E 350D0A3B *S Version 1.5...;
40 20202020 20202020 20202020 20202043 * C*
50 6F707972 69676874 20284329 20313938 *opyright (C) 198*
60 312C2031 3938322C 20313938 33206279 *1, 1982, 1983 by*
70 204B656C 6C792053 6D697468 0D0A3B0D * Kelly Smith...;*
```

:w⤵ (Write it)

:x⤵ (Do with me what you will)

A> Ahhhhhh... that's better!

5.4 A "Poor Man's" Disk Test

DU can also function in the capacity of a "Poor Man's" disk test by performing simple sequential write/read/seek functions with user-specified data patterns. Here in very simple form, is a 4-sector non-destructive read-only/seek test. Any subsequent errors would be trapped by the CP/M BDOS and stop the "test" with whatever error message was appropriate (e.g., BDOS Err on B: BAD SECTOR):

:t20:s1⤵

G=0040:00, T=20, S=1, PS=0

:+;+;+;+;-;-;-;/⤵ (read forward 4 sectors, read backward 4 sectors, repeat ad nauseum — actually until ^C.)

G=0040:01, T=20, S=2, PS=1

G=0040:02, T=20, S=3, PS=2

G=0040:03, T=20, S=4, PS=3

G=0040:04, T=20, S=5, PS=4

G=0040:03, T=20, S=4, PS=3

G=0040:02, T=20, S=3, PS=2

G=0040:01, T=20, S=2, PS=1

G=0040:00, T=20, S=1, PS=0
 G=0040:01, T=20, S=2, PS=1
 G=0040:02, T=20, S=3, PS=2
 G=0040:03, T=20, S=4, PS=3
 G=0040:04, T=20, S=5, PS=4
 G=0040:03, T=20, S=4, PS=3

Days or weeks later . . .

G=0040:03, T=20, S=4, PS=3
 G=0040:02, T=20, S=3, PS=2
 G=0040:01, T=20, S=2, PS=1
 G=0040:00, T=20, S=1, PS=0
 G=0040:01, (interrupted with ^C from the keyboard)

By using your imagination, you can come up with a variety of useful applications for DU. Have fun!

* * * * *

An Introduction to ZCPR

by Author Unknown

ZCPR is a Z80 replacement for CP/M's CCP. This guide explains the differences and provides an introduction to the commands and utilities available in a ZCPR environment.

TYPE

Under the old system, when the CCP received a TYPE command, it went merrily along writing to the screen as quickly as the video section would allow.

On a Kaypro running 2.5MHz, the display can be easily controlled with ^S. My Kaypro is now running 5MHz and the text on the screen is often scrolling too fast for ^S to stop it where I want.

ZCPR automatically "pages" (i.e., displays a screen-full of text) and then politely waits for any character from the console before displaying the next page. When using this command, entering a regular character may have the undesirable effect of printing that character. I usually use the up cursor key since it is not printable. To disable paging merely follow the filename with a P, thus:

TYPE ZCPR.DOC will page
TYPE ZCPR.DOC P will not page

LIST

This is an added function that comes with ZCPR. LIST will send the specified file to the LST: device without paging. This is intended to be easier to use than PIP LST:= etc., and not as uncaring as ^P, thus:

LIST ZCPR.DOC sends ZCPR.DOC to the LST: device

ERA

ERA has been improved when erasing files with ambiguous file names. ERA under ZCPR lists each file to the screen as it is erased.

SAVE

With the CCP, whenever DDT was used to modify a file the SAVE command needed to have a decimal file size. This was

unfortunate since DDT provides hex file size information. SAVE under ZCPR will allow the size to be either decimal or hex. In addition, SAVE also will accept the size to be expressed in sectors:

SAVE 16 A.COM saves 16 pages
SAVE 10H A.COM saves 16 pages
SAVE 16 B.COM S saves 16 sectors
SAVE 10H B.COM S saves 16 sectors

Also, if SAVE sees a file in the directory with the same name as the file it is SAVEing it will prompt the user Delete File?. The user may answer Y and the original file will be over-written or N and the SAVE attempt will be aborted.

REN

This file renaming program is also improved by ZCPR. Like SAVE it will prompt the user if the new name requested is already present in the directory.

DIR

Under ZCPR, DIR can be made to show only non-system files, system files or both:

DIR *.ASM will show non-system .ASM files
DIR *.ASM S will show system .ASM files
DIR *.ASM A will show all .ASM files

Exclusive ZCPR Commands

GET <address> ufn

This command allows the user to load a file from disk into memory at a specific address, regardless of what may be at that memory location:

GET 1000 A.COM will load A.COM at 1000H

The address must be in hex.

JUMP <address>

This command will "call" a routine at the memory location specified:

JUMP 1000 will begin execution of the program at 1000H

The address must be in hex.

GO

This command is similar to jump but it does not allow an address specification. GO will simply begin execution of whatever program resides at 100H (the beginning of the TPA). GO is functionally equivalent to JUMP 100.

The source code and the full ZCPR manual is available on disk from the FOG library. Pre-installed versions are available for some computers.

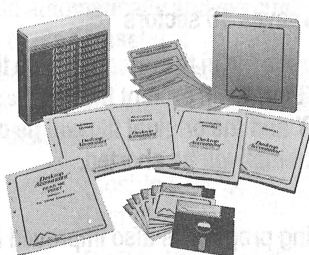
* * * * *



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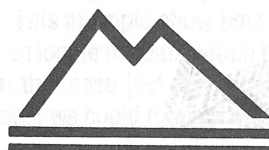
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Real Time Clock

Software Version 3.2

by Jim Dunn

The RT-60A real time clock version 3.2 for the Osborne 1 from J.G. Communications is the software update to version 2.7.

The latter did not work well with WordStar with blinking cursor and print spooler patches and the SWP CO-Power 88 board I had installed in my Osborne 1.

The reason I wanted rev. 3.2 was to enable the real time clock, WordStar and the CO-Power unit to work at the same time. The updated software costs \$5 if you mail J.G. Communications a blank, formatted diskette. I mailed my money and diskette and six weeks later received the rev. 3.2 software for the RT-60A clock. The files on the diskette were:

AUTONAME.COM	2K	Modifies disk to call CLOCK instead of AUTOST
BULETIN1.DOC	5K	Explains how MBASIC can access RT-60A
BULETIN2.DOC	5K	Explains how dBASE can access RT-60A
BULETIN4.DOC	4K	Microjustification with WordStar and CLOCK
CLKSET .BAS	15K	MBASIC program to set time and format of CLOCK
CLOCK .COM	5K	Standard CLOCK program
CLOCK .DRC	5K	CLOCK program for Drive C add-on
CLOCK .SPL	5K	CLOCK program for special add-ons
CLOCKA .COM	5K	CLOCK program for microjustification & WS
CLOCKA .DRC	5K	Microjustification, WS and Drive C
CLOCKA .SPL	5K	Microjustification, WS and special add-ons
FLY .COM	2K	Loads function keys definitions "on the fly"
INIT .COM	2K	Initializes disk for time and date stamping
INST .DOC	10K	Instructions for using rev. 3.2 software
PGMSTART.COM	2K	Executes program at specified time
XDIR .COM	2K	Disk directory with file's time and date
XXDIR .COM	2K	Another version of disk directory

After reading the INST.DOC and BULETINn.DOC files, I was ready to use the new software. I took a new diskette and SYSGENed it, copied WordStar, RAM-disk software and clock software to it. I set the clock time and date and set the format of the time and date display using CLKSET.BAS.

I next used AUTONAME.COM to have the Osborne call CLOCK.COM instead of AUTOST.COM when the disk is booted. When I ran CLKSET I had specified that when CLOCK was finished to call AUTOST.COM. I modified my version of AUTOST.COM to call RAMDISK A,N when AUTOST finished.

Now when I boot with the new diskette, the clock software is loaded into high memory, time and date are displayed, then AUTOST is called. AUTOST displays a logo and personalized message, then calls the RAM-disk software. The RAM-disk

software is loaded also into high memory and into the CO-Power 88. The "A,N" command trailer sets the RAM-disk up as "virtual drive A", does not clear the RAM-disk directory and assigns physical drives A and B to virtual drives B and C.

At this point the A> prompt is displayed and control returns to keyboard entry.

The above sequence took several hours of experimentation in order to get everything to work correctly. Here are some tips to avoid problems:

- 1) Call CLOCK first before installing RAM-disk software.
- 2) With SWP's CO-Power 88 RAM-disk use CLOCK.SPL (Erase the supplied CLOCK.COM and rename CLOCK.SPL --> CLOCK.COM).
- 3) During CLKSET, when specifying a program to be called after CLOCK is finished, be sure to type the program name in capital letters. Also you can't put command trailers at this point (you will get an error message Redo from start).

Using the clock software will cost some space in high memory. The following chart shows what each combination will cost in terms of TPA space, which is where most programs are loaded and executed.

System Setup	TPA	BDOS Start
Standard double density	52.5K	D306
w CLOCK.COM	50.8K	CC06
w CLOCK.SPL or DRC	49.0K	C506
w RAMDISK.COM	49.5K	C700
w CLOCK.SPL and RAMDISK.COM	46.0K	B900

The clock software adds a new function key, @. When the @ key is pressed, nothing appears on the screen until the next key is pressed. If a D or T was the next keystroke then the current Date or Time is entered at the cursor in the format defined by CLKSET.BAS.

If a P was entered then the clock software will turn off the Phantom time display. If an A was entered the printer "At Trap" is turned off. If an F was entered then the function key @ is disabled and if an O was entered then all the clock software would be disabled.

To use the clock software to time and date stamp disk files it is necessary to run INIT.COM. This program will assign in the directory section of the diskette a creation date for each file and allow time and date stamping.

INIT worked on both regular diskettes and the RAM-disk, however when a file was updated or created on the RAM-disk (after INIT had been run) the time and date information was not updated. This function works on regular diskettes so the RAM-disk software must be preventing the time and date stamping from working properly.

This is no problem as files on a RAM-disk are temporary and usually are the latest version of the file I am working on.

Be aware that the high order bit of the third and fourth letters of a file's name get set in the directory. Those high bits caused a problem only when I transferred some files to MS-DOS format with Media Master. MBASIC "files" command illustrates this by underlining the third and fourth letters of the file name.

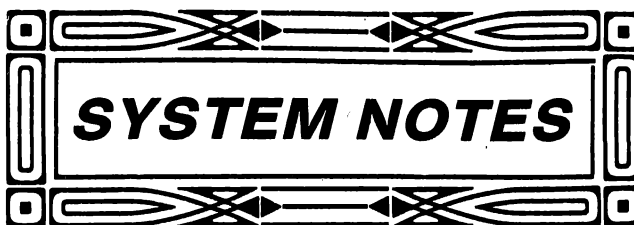
In the short time I have used rev. 3.2 I have had no problem with my patched version of WordStar running on RAM-disk with the clock software turned on. It is nice to have the current time displayed on the CRT and the other features of the clock working. These other features will be the subject of later newsletter articles as I have a chance to use and experiment with them.

J.G. Communications' address and telephone number are:

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Want Library Copies?

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An Elegant Solution for the Twelve-Coin Puzzle

by Ernest T. Thiersch

The puzzle reads, "Pretend you have 12 coins of which at most one might be a little heavy or light. You have a balance scale and are to find the unusual coin in just three weighings."

The program 12-COIN.BAS will identify the odd coin (which you have to assume) after you have answered just three questions by typing either a -1 or +1. It is easily the most elegant BASIC program that I have seen. It was written in response to a challenge that appeared in **POPULAR COMPUTING** of March 1985.

It is a double solution:

cont. on page 43

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CALENDAR

Under this heading you will find the listing of activities and events of Affiliated Member Organizations. Listings are the responsibility of the groups' officers. Officers must have corrections into FOG office by the first of the month prior to publication (December 1st for the January issue). For a list of other groups, see **"CONTACTS"** in back issues starting January, 1983, or send a stamped, self-addressed envelope to the FOG offices. Please include a note with your geographical area. To verify the meeting date, time, or location, call the number in the right hand column.

Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Dec 16	Soldotna, AK	18-PenFOG	3 rd M	7:00pm	Totem Realty, 44669 Sterling Highway	907-262-5801
Dec 16	Anchorage, AK	63-GLOB	3 rd M	7:00pm	Wendler Jr. High School, Room 133, 2905 Lake Otis Parkway	907-276-6484
Jan 9	Sitka, AK	83-BUG	2 nd Th	7:30pm	Human Services Center, 207 Moller Dr.	907-747-8615
Jan 14	Ketchikan, AK	89-KCPM	2 nd Tu	7:00pm	1182 Black Bear Road	907-225-9249
Dec 28	Homewood, AL	49-FAOUG	last Sa	1:00pm	Homewood Public Library, 1755 Oxmoor Road	205-669-4396
Jan 2	Huntsville, AL	125-NAOUG	1 st Th	7:00pm	Madison County Court House, Jury Venire Rm	205-881-0377
Jan 9	Ft. Smith, AR	23-AFOG	2 nd Th	7:00pm	Lewis Paint and Supply, 4900 Wheeler Avenue	501-785-0820
Jan 7	Tempe, AZ	100-TOG	1 st Tu	6:30pm	Tempe Public Library, Pyle Adult Center, Southern Ave at Rural Rd	602-438-2731
Call	Stockton, CA	11-SOG	4 th W	7:00pm	Citicorp Savings, Pacific Ave.	209-951-4701
Jan 13	Fresno, CA	35-FROG	2 nd M	7:00pm	1434 West Shaw, Suite A	209-683-2252
Call	Porterville, CA	66-SVFOG	4 th Tu	6:00pm	1502 North Lowery	209-781-4123
Jan 28	Porterville, CA	66-SVFOG	2 nd Tu	6:00pm	1502 North Lowery	209-781-4123
Dec 18	Long Beach, CA	130-OPEN	3 rd W	6:30pm	C.S.U., Learning Assistance Center	213-498-4186 x 5350
Jan 2	Palo Alto, CA	1-1 st FOG SV	1 st Th	7:30pm	Ford Aerospace Cafeteria, 3939 Fabian Way	408-371-8699
Jan 10	Castroville, CA	5-MBAOCUG	2 nd F	7:00pm	Castroville Fire Station, Rec Room, Speegle & Pomber	408-449-4021
Dec 26	San Francisco, CA	2-SFCS	4 th Th	7:00pm	St. Aidan's Church, Goldmine & Diamond Hgts.	415-239-1399
Jan 8	Oakland, CA	3-East Bay FOG	2 nd W	6:00pm	B & B Electric, 2832 Ford Street	415-272-9099
Jan 14	San Rafael, CA	31-MOG	2 nd Tu	7:00pm	San Rafael High School, 2nd Street	415-897-0629
Dec 18	Walnut Creek, CA	60-MTDOG	3 rd W	7:00pm	Thurman Casey Memorial Library, 2661 Oak Grove Road	415-933-2665
Dec 16	Menlo Park, CA	68-SMOG ³	3 rd M	7:30pm	Crane Place, 1331 Crane	415-325-2442
Jan 6	Menlo Park, CA	68-SMOG ³	1 st M	7:30pm	Crane Place, 1331 Crane	415-325-2442
Jan 13	29 Palms, CA	114-HOG	2 nd M	6:00pm	CONFIRM	619-367-9783
Dec 18	Arcata, CA	29-HOG	3 rd W	7:15pm	Humboldt State Univ., Science Bldg., Rm 126	707-445-2074
Jan 2	Santa Rosa, CA	56-No. Bay FOG	1 st Th	7:30pm	Valley Oak Park Rec Hall, 2600 Northcoast St.	707-546-0145
Jan 5	Orange, CA	113-NOCOG	1 st Su	2:30	Chapman College, Science Bldg., Rm 128	714-952-5627
Jan 7	Santa Maria, CA	42-SMOG	1 st Tu	7:00pm	Sears Savings Bank, 401 South Broadway	805-937-1128
Jan 9	San Luis Obispo, CA	47-CCOG	2 nd Th	7:00pm	TRW, 1050 Southwood Drive	805-544-4267
Call	Santa Barbara, CA	69-OSBUG	last Tu	7:30pm	SB Planning Rm, 105 E. Anapamu St	805-687-8541
Jan 10	Chatsworth, CA	86-ONUG	2 nd F	7:00pm	20630 Lassen Street	818-709-6202
Dec 23	Sherman Oaks, CA	106-TUG-NET	4 th M	7:00pm	Central Savings, 4464 Van Nuys Blvd.	818-994-6567
Jan 2	North Hollywood, CA	106-TUG-NET	1 st Th	7:00pm	Valley Plaza Park Community Center, 12240 Archwood	818-994-6567
Jan 9	Davis, CA	6-MUGSY	2 nd Th	7:00pm	CONFIRM	707-557-5162
Call	Sacramento, CA	61-SOG	1 st W	7:00pm	SMUD Utility Bldg, 1708 59 th St	916-456-4139
Jan 2	Denver, CO	4-DOG	1 st Th	7:00pm	Clements Comm. Center 2 nd Floor 1580 Yarrow	303-690-6301
Call	Boulder, CO	65-BUG	4 th W	7:00pm	Colorado Univ. Business School, Rm 101	303-494-8741
Jan 8	Boulder, CO	65-BUG	2 nd W	7:00pm	Colorado Univ. Business School, Rm 101	303-494-8741
Call	Thornton, CO	85-MIST	1 st W	7:00pm	12599 North Colorado Blvd	303-451-0456
Dec 18	Ft. Collins, CO	115-FTCOG	3 rd W	7:30pm	C.S.U. Ind. Sciences Computer Lab, 200 W. Laurel, Rm 200	303-226-4156
Dec 18	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Call	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Call	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647

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Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Jan 18	Colorado Springs, CO	133-CSOG	each W	7:00pm	Hewlett Packard, Garden of the Gods, Spruce Rm	303-473-7647
Call	Danbury, CT	40-DOG	4 th W	7:00pm	QUALCORP Conference Roon, Shelter Rock Road	203-775-1102
Jan 8	Danbury, CT	40-DOG	2 nd W	7:00pm	QUALCORP Conference Room, Shelter Rock Road	203-775-1102
Dec 19	Orlando, FL	16-GOOUg	each Th	7:30pm	Gard Micro Systems, 7525 Currency Road	305-847-7031
Dec 26	Orlando, FL	16-GOOUg	each Th	7:30pm	Gard Micro Systems, 7525 Currency Road	305-847-7031
Jan 2	Orlando, FL	16-GOOUg	each Th	7:30pm	Gard Micro Systems, 7525 Currency Road	305-847-7031
Jan 9	Orlando, FL	16-GOOUg	each Th	7:30pm	Gard Micro Systems, 7525 Currency Drive	305-847-7031
Dec 19	Maitland, FL	20-CFLOG	3 rd Th	7:30pm	Lake Faith Villas Club Room, Maitland Blvd	305-298-8576
Jan 2	Maitland, FL	20-CFLOG	1 st Th	7:30pm	Lake Faith Villas Club Room, Maitland Blvd	305-298-8576
Jan 12	Miami, FL	26-GCOUG	2 nd Su	1:30pm	F.I.U Tamiami Campus, Building DM, Room 100	305-233-1779
Jan 9	Ft. Lauderdale, FL	91-FLOG	2 nd Th	7:00pm	Harris Computer Sys, 2101 W. Cypress Creek	305-748-7237
Jan 14	Tallahassee, FL	77-TCPMUG	2 nd Tu	7:30pm	Episcopal Church of the Advent, 815 Piedmont Drive	904-878-4592
Jan 8	Jacksonville, FL	98-JOUG	2 nd W	7:00pm	JEa Bldg, 233 W. Duval Street	904-633-4920
Jan 6	Athens, GA	81-CP/M Athens	1 st M	7:00pm	Athens Microcomputer Center, W. Broad Street	404-353-2127
Jan 13	Atlanta, GA	93-TOGA	2 nd M	7:00pm	Emory University, Chemistry Bldg. Ampitheater, Decatur Road	404-636-1480
Call	Hilo, HI	124-HIFOG	????		Shayne Enterprises, 180 Kinoole Street	808-935-8678
Dec 23	Davenport, IA	102-QCOG	4 th M	7:00pm	CONFIRM	319-386-3484
Jan 8	Davenport, IA	102-QCOG	2 nd W	7:00pm	CONFIRM	319-386-3484
Dec 10	Des Moines, IA	12-Midwest FOG	2 nd Tu	7:00pm	(odd months) Yonker's Computer Depot, 100 Merle Hay Plaza	515-270-3573
Jan 14	Ames, IA	12-Midwest FOG	2 nd Tu	7:00pm	(even months) IA State Univ. 200 Engineering Annex	515-270-3573
Jan 9	Sioux City, IA	38-SOG	2 nd Th	7:30pm	Western Iowa Tech., Room 508	712-252-2182
Dec 15	River Grove, IL	80-CFOG	last Su	1:00pm	College Center Bldg, Triton College, 2000 Fifth Ave	312-654-0986
Jan 11	River Grove, IL	80-CFOG	2 nd Sa	1:00pm	College Center Bldg, Triton College, 2000 Fifth Ave	312-654-0986
Call	Rockford, IL	84-GROG	????		CONFIRM	815-874-7146
Jan 2	W. Lafayette, IN	34-HOG	1 st Th	7:00pm	CONFIRM	317-474-0253
Jan 13	Evansville, IN	46-E-OSBUG	2 nd M	6:30pm	Oaklyn Branch Evansville Library, Oakhills & Lynch	812-479-5108
Jan 6	Bloomington, IN	87-IOU	1 st M	7:30pm	Indiana Univ, Cyclotron Facility, 2401 M. B. Sampson Lane	812-334-3234
Call	Wichita, KS	21-OPEK	4 th Tu	7:30pm	St. Paul's Methodist Church, 1356 Broadway	316-832-0447
Jan 7	Hutchinson, KS	137-HUTCH	1 st Tu	7:30	Hutchinson Public Library	316-663-7678
Jan 12	Louisville, KY	64-PCCL	2 nd Sa	1:00pm	Univ. of Louisville, Burhans Hall Rm 202, Shelbyville Road	502-451-0508
Dec 21	Lexington, KY	32-KOG	3 rd Sa	12:00n	213 Funkhouser Building, University of Kentucky	606-269-1684
Jan 13	Baton Rouge, LA	103-FLOG	2 nd M	7:00pm	Johnson Equipment Co., 4264 Perkins Road Co.	504-923-0888
Call	Bedford, MA	122-BOG	last Tu	7:30pm	Mitre Corp., Route 62	617-484-1863
Jan 3	Lexington, MA	122-BOG	2 nd F	7:30pm	Honeywell Electro Optical Div, Route 2A	617-484-1863
Call	Silver Spring, MD	96-ERC-OUg	????		CONFIRM	301-622-4400x5331
Dec 16	Portland, ME	136-SMOG	3 rd M	7:00pm	Portland Jetport Conference Room	207-772-1616
Dec 16	Dearborn, MI	14-DeFOG	3 rd M	7:30pm	Ford Tech Center Cafeteria, 1700 Rotunda Dr	313-626-6641
Dec 19	Ann Arbor, MI	37-TOGA ²	3 rd Th	7:00pm	Neuro Science Bldg. Univ. of MI, 1103 East Huron St	313-665-5753
Jan 14	Duluth, MN	118-DSO	2 nd Tu	7:00pm	1440 90th Avenue West	218-626-3344
Jan 9	St. Paul, MN	111-TCOG	2 nd Th	7:00pm	Univ. of MN, St. Paul Campus Rm B-45 Classrm Off Bldg	612-698-0225
Call	St. Louis, MO	55-SLOG	4 th Tu	7:00pm	Thornhill Library, 12863 Willowyck	314-991-4399
Call	Kansas City, MO	97-MIZOG	Last Tu	7:00pm	TWA Bldg, 13 th & Baltimore	913-686-2853
Jan 7	Jackson, MS	58-MCPM	1 st Tu	7:00pm	Entre Computer Center, Capitol Street	601-981-2811
Jan 13	Charlotte, NC	71-LOGIC	2 nd M	7:30pm	Home Federal Savings and Loan, Carmel Road	704-377-1154
Dec 12	High Point, NC	107-TROGIC	2 nd Th	7:30pm	(Even Months) High Point College, Science Building, Basement	919-766-5530
Jan 13	High Point, NC	107-TROGIC	2 nd M	7:30pm	(Odd Months) High Point College, Science Building, Basement	919-766-5530
Dec 16	Raleigh, NC	8-ROCC	3 rd M	7:30pm	CONFIRM — Dreyfus Aud., Research Triangle Inst.	919-782-9576
Dec 19	Fargo, ND	117-O/KUG	3 rd Th	7:00pm	NDSU, Civil Engineering, Room 216	701-280-1700
Jan 14	Lincoln, NE	39-Lincoln LOG	2 nd Tu	7:30pm	5530 O Street	402-761-3393
Dec 18	Woodbridge, NJ	138-JOG	3 rd W	7:30pm	St. James School, Main Street	201-272-2073
Dec 26	Albuquerque, NM	127-AOG	last Th	7:00pm	CONFIRM	505-268-3606
Jan 14	Albuquerque, NM	127-AOG	2 nd Tu	7:00pm	CONFIRM	505-268-3606

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Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Dec 18	Las Vegas, NV	25-VOG	3 rd W	7:00pm	CONFIRM	702-452-2544
Jan 14	New York, NY	135-NYUG	2 nd Tu	7:00pm	73 Franklin Street	212-594-5976
Jan 5	Syracuse, NY	82-SOUP	1 st Su	1:00pm	Location Varies — Confirm	315-471-1405
Jan 8	W. Hempstead, NY	88-LION	2 nd W	7:30pm	Adelphi Univ Cont Ed Ctr, Room 110, Eagle Ave	516-481-0129
Jan 8	Ithaca, NY	101-FLOG	2 nd W	7:30pm	Cornell Univ, G-94 Uris Hall	607-257-2030
Jan 14	Rochester, NY	132-FROG	2 nd Tu	7:30pm	Monroe County Cooperative Ext. Center, 249 Highland Avenue	716-385-3456
Dec 18	Rye, NY	104-WOG	3 rd W	7:15pm	Westchester Federal Savings Bank, 67 Purchase Street	914-725-1098
Jan 6	Oberlin, OH	9-«Ob«Os	1 st M	7:30pm	Oberlin College, Rice Faculty Lounge, W. College Street	216-775-8706
Jan 13	Uniontown, OH	44-AKCAN	2 nd M	6:30pm	13100 Cleveland Avenue NW	216-837-8926
Jan 8	Cleveland, OH	75-COG	2 nd W	7:00pm	United Way, 3100 Euclid Avenue	216-888-2078
Dec 17	Cincinnati, OH	27-COG	3 rd Tu	7:00pm	Central Trust Center 6th floor, 5th & Main Streets	513-232-4076
Jan 7	Dayton, OH	79-DOUG	1 st Tu	7:30pm	St. Paul's Episcopal Church, 33 Dixon Drive	513-837-5651
Jan 8	Oklahoma City, OK	67-OKLOG	2 nd W	7:30pm	Southwestern Bell, 111 Dean A McGee, Blue & Gold Rm	405-360-2141
Dec 26	Tulsa, OK	51-OUT	4 th Th	8:00pm	Sheridan Library, 62 North Sheridan Road	918-587-3918
Call	Medford, OR	54-RVOG	????		CONFIRM	503-773-1222
Call	Portland, OR	57-PMS	4 th W	7:30pm	Bonneville Power Admin. Aud., 1002 NE Holladay St.	503-642-9692
Jan 5	Eugene, OR	128-LOCUG	1 st Su	7:00pm	Farwest Federal Bldg., 96 E. Broadway	503-747-8242
Jan 12	Philadelphia, PA	121-PhROG	2 nd Sa	9:30am	Merck, Sharp & Dome, Sumneytown Pike	215-648-5862
Dec 22	Pittsburgh, PA	50-TROG	4 th Su	2:30pm	Mellon Science Building, Duquesne Univ.	412-456-3946
Dec 26	Lancaster, PA	74-LOG	last Th	7:30pm	3426 Horizon Drive,	717-285-4940
Dec 19	Lemoyne, PA	92-MIDPOG	3 rd Th	7:30pm	One Stop Computer, 65 N. 5 th St	717-243-7858
Call	Greenville, SC	41-POGO	4 th Tu	6:30pm	C. Douglas Wilson, 201 E. North Street	803-233-3434
Dec 18	Knoxville, TN	13-SMOG	3 rd W	7:30pm	(even months) 11505 Kingston Pike	615-483-6857
Jan 15	Oak Ridge, TN	13-SMOG	3 rd W	7:30pm	(odd months) ECS 136 Fairbanks	615-483-6857
Dec 19	Nashville, TN	119-MidTOG	3 rd Th	7:00pm	Cumberland Museum, 800 ridley blvd.	615-244-5343
Jan 14	Memphis, TN	15-MOG	2 nd Tu	7:15pm	Memphis State University, Math Building	901-522-1234
Dec 19	College Station, TX	43-AGGNOG	3 rd Th	5:30pm	A & A Building, Texas A & M Univ. Room 503	409-845-7770
Dec 18	Austin, TX	7-AEIOU	3 rd W	6:30pm	Old Quarry Library off Far West Blvd. 7051 Village Center	512-836-3010
Dec 20	Houston, TX	76-OUCH	3 rd F	7:30pm	Univ. Houston, 101 Farish Hall, KIVA Rm. (Use lot 1341 off Cullen)	713-931-1096
Jan 11	Houston, TX	108-CLOG	2 nd Sa	9:00am	Gilruth Rec. Center, Johnson Space Center	713-554-4304
Dec 22	Amarillo, TX	28-POG	4 th Su	2:30pm	Downtown Branch Amarillo Public Library	806-355-7509
Jan 12	Amarillo, TX	28-POG	2 nd Su	2:30pm	Downtown Branch Amarillo Public Library	806-355-7509
Jan 13	Lubbock, TX	134-LOG	2 nd M	7:30pm	Texas Tech Univ. Law Bldg., 19th & Hartford Room 202	806-742-3920
Dec 18	Provo, UT	30-KAOS	3 rd W	7:00pm	Wiltec Research Co. 488 South 500 West	801-225-8293
Dec 19	Salt Lake City, UT	105-SMOG	3 rd Th	6:00pm	Master Mind Computers, 448 S. 400 E	801-268-2831
Dec 19	Richmond, VA	52-CVOG	3 rd Th	7:00pm	Red Cross Bldg, 4 th and Main	804-270-4936
Dec 21	Norfolk, VA	78-TOG	3 rd Sa	9:00am	ECPI, 3661 East Virginia Beach Blvd.	804-495-1596
Dec 19	St. Croix, VI	70-StCOUG	3 rd Th	6:30pm	St. Croix Country Day School Library	809-773-7551
Jan 6	Tacoma, WA	72-TOG	1 st M	7:00pm	Parkland Library (Basement Mtg Rm) 404 Garfield So.	206-752-5582
Dec 18	Federal Way, WA	99-SKOG	3 rd W	7:30pm	Highline Comm. Coll, Gold Rm — Bldg 4	206-643-3521
Dec 16	East Wenatchee, WA	10-WOG	3 rd M	7:00pm	211 Ridgmont Drive	509-884-3279
Jan 9	Richland, WA	19-TROG	2 nd Th	7:00pm	Richland Public Library, Swift & Northgate	509-967-2430
Jan 8	Spokane, WA	123-SMUG	2 nd W	7:00pm	Komputer Korner, N. 2001 Monroe	509-482-7989
Jan 6	Milwaukee, WI	22-MilwOG	1 st M	7:00pm	Math Bldg. Rm 495, Univ. of W. M.	414-255-0440
Jan 7	Madison, WI	129-MOO	1 st Tu	7:00pm	Univ of WI., 1210 West Dayton Street, Rm B-214	414-887-2036
Dec 18	St. Albans, WV	59-Valley FOG	3 rd W	6:30pm	Public Library, 6th Ave. and 4th Street	304-727-8716
Call	Melbourne, Aust	131-VOUG	4 th W	6:00pm	(even months) RMIT, Swanson St., Floor 9, Bldg. 12, Rm 908	03-459-8934
Jan 26	Ashburton, Aust	131-VOUG	4 th Su	2:00am	(odd months) Ashburton Public Library, 152 High Street	03-459-8934
Jan 13	Edmonton, Alta	45-KOG	2 nd M	7:30pm	Alberta Vocational College, 10215 - 108 Street	403-464-5088
Jan 13	Calgary, Alta	94-COUG	2 nd M	7:30pm	616 Macleod Trail S, Seminar room 3,	403-239-5685
Jan 8	Vancouver, B.C.	17-VPCC	2 nd W	7:30pm	Hastings Community Center, 3096 East Hastings	604-298-6990
Jan 14	Victoria, B.C.	48-VIOG	2 nd Tu	7:30pm	University of Victoria, Clearihue Bldg.	604-383-1512

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Date	City	A.M.O.	Day	Time	Meeting Address	Contact No.
Dec 30	Toronto, Ont	120-OUCT	last M	7:00pm	Parkdale Public Library, 1303 Queen St. W.	416-533-1531
Jan 14	London, Ont	95-LOG	2 nd Tu	7:30pm	Univ. of W. Ont., Elborn College, Room 2130	519-438-7224 x267
Jan 2	Montreal, P.Q.	73-Microcozm	1 st Th	6:30pm	Hillside Armoury, 3 Hillside Lane	514-932-4164
Call	Charlottenlund, Denmark	126-FORMICRO	????	5:00pm	CONFIRM	45-1-631760
Jan 13	Paris, France	110-OUF	2 nd M	6:30pm	Centre Andre Malraux, 78 Bd Raspail	1-544-6216
Call	Hong Kong	116-HONG KOG	????		CONFIRM	852-5-8171714
Jan 14	Auckland, New Zealand	53-NZOG	2 nd Tu	8:00pm	Auckland University, Human Sciences Building, Rm 336	275-4310
Call	Wellington, New Zealand	109-CROG	1 st W	7:30pm	Cafeteria of Trade Span (N Z), 300 Tranaki St.	0064-4-791-172
Jan 2	Dhahran, Saudi Arabia	33-DPOG	1 st Th	10:00am	ARAMCO Mgmt Training Center	874-4798
Dec 17	Edenvale, So Africa	90-JOG	3 rd Tu	6:30pm	Civic Centre	011-51-6304
Jan 12	Bangkok, Thailand	36-CP/M BUG	2 nd Sa	1:00pm	Action Compters 5126 Saladaeng Road, Silom	391-0963 x 86
Dec 18	Kaiserslautern, W. Ger.	62-FROG	3 rd W	7:00pm	Ramstein Air Base, Ramstein Rec. Center	49-6371-13117
Call	Schweinfurt, W. Ger.	112-SWOG	????		CONFIRM	09721-68064
Jan 6	Wiesbaden, W. Ger.	24-AGOG	1 st M	7:00pm	Lindsey Air Station, Bld. A-24 Rm. 301	069-69-3218

FOG FONES

System ID	Phone number	Location	Size	Baud rate	When in operation	Notes
FOG office	(415) 755-2000	Daly City, CA	voice only		10am - 5:30pm/M-F	<i>voice calls only please</i>
FOG #1	(415) 755-2030	FOG Office	47Mb	3/12/24	24 hrs/seven days	
FOG #2	(604) 941-2972	Vancouver, BC	10Mb	300/1200	24 hrs/seven days	
FOG #3	(415) 992-8542	Daly City, CA	47Mb	3/12/24	24 hrs/seven days	
FOG #4	(415) 591-6259	Belmont, CA	10Mb	3/12/24	24 hrs/seven days	technical notes
FOG #5	(415) 424-1482	Palo Alto, CA	10Mb	300/1200	24 hrs/seven days	Pres. Council
FOG #6 (Library)	(415) 755-8315	FOG Office	47Mb	3/12/24	24 hrs/seven days	Uploads/Hackers
FOG #10	(717) 657-8699	Harrisburg, PA	20Mb	3/12/24	24 hrs/seven days	
FOG #11 (KAY*FOG)	(415) 285-2687	San Francisco, CA	10Mb	300/1200	24 hrs/seven days	message system
FOG #12	(916) 283-3048	Quincy, CA	40Mb	300/1200	24 hrs/seven days	new number
FOG #13 (Constitutional Pathway Thirteen)	(405) 848-5317	Oklahoma City, OK	10Mb	300/1200	24 hrs/seven days	
FOG #14	(217) 344-4032	Urbana, IL	10Mb	300/1200	24 hrs/seven days	
FOG #18	(707) 557-4403	Vallejo, CA	46mb	300/1200	24 hrs/seven days	Long Range Planning Comm.
FOG #21	0908-614469	Milton Keynes, England	10Mb	300/multi	24 hrs/seven days	
FOG #22	(817) 662-2487	Waco, TX	10Mb	300	6pm - 6am/M-F; 24hrs/S-S	
FOG #23	(615) 292-0710	Nashville, TN	11Mb	300/1200	24hrs/seven days	Epson PX-8 SIG
FOG #24 (SoftStone)	(502) 241-4109	Louisville, KY	760K	300/1200	24hrs/seven days	
FOG #25	(319) 326-3904	Davenport, IA	360K	300/1200	24hrs/seven days	
FOG #26	(313) 792-7169	Mt. Clemens, MI	360K	300/1200	24hrs/seven days	
FOG #27	(404) 354-0662	Athens, GA	10Mb	300/1200	24hrs/seven days	
FOG #29	(617) 288-4667	Boston, MA	11Mb	300	5pm - 9am/M-F; 24hrs/S-S	
FOG #30	(714) 962-9999	Huntington Beach, CA	44Mb	300/1200	24hrs/seven days	
FOG #31	(415) 692-1406	Burlingame, CA	780K	300/1200	24hrs/seven days	
FOG #32 (FOG*Light)	(408) 287-7108	San Jose, CA	22Mb	300/1200	24hrs/seven days	2400 baud coming
FOG #33	(415) 655-1206	Oakland, CA	10Mb	300/1200	24hrs/seven days	
FOG #38	(415) 792-3481	Newark, CA	45Mb	3/12/24	24hrs/seven days	
FOG #40	(415) 323-4579	Menlo Park, CA	22Mb	300/1200	24hrs/seven days	2400 baud coming

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- (1) It solves a puzzle which has been around for many years, (I first heard of it in the late 50's, when Burroughs used it as part of a preemployment aptitude test. The applicant was given one hour to write an algorithm for the solution — not in the form of a program, just handwritten, longhand).
- (2) It reduces the solution to a compact, high level BASIC program — 51 lines without the introduction — and employs some real fancy footwork. (My own longhand solution covered an 8-1/2" x 11" page with numbers, boxes and horizontal lines.)

I was so impressed with the work that I got in touch with the author, Dr. David Grossman (IBM Research Center, Yorktown Heights, NY), and, in particular, asked for an explanation of line 170. This is from his reply:

"Nearly all implementations of BASIC, as well as many other programming languages, have the convention that 0 is false and NOT 0 is true. The preferred value of true is usually -1 because when -1 is presented as an integer, the 16-bit binary form is 1111111111111111, which is as opposite as possible to false; which is 0000000000000000. So, in BASIC the expression $3 < 5$ is -1, i.e., true, while $3 > 5$ is 0, i.e., false. And, in fact, IF 0 GOTO A ELSE GOTO B will go to B, while IF -1 THEN GOTO A ELSE GOTO B will go to A. OR just computes the logical OR bitwise. AND just computes the logical AND bitwise. So:

A > B OR C > D

This is this is

0 or -1 0 or -1 [And the truth table for OR is]

0 or 0 is 0

0 or -1 is -1

-1 or -1 is -1

-1 or 0 is -1 (End of Quote from Dr.Grossman)

I wanted to share my pleasure over this program with you. To do that, I had to invent a name for the program. If it already is in the public domain under another name — my apologies to the author, and a request to FOG to change the name of this submission accordingly.

If you wish to incorporate it in our library, you should show in the DISK.DOC the name of Dr. Grossman as the author and state that it appeared in *POPULAR COMPUTING*. The DOC for the program could be the text of lines 50-80 of 12-COINS-BAS, 12-COIN.BAS.

```
10 '12-COIN PUZZLE REF POP COMP 3/85
40 PRINT 'Pretend you have 12 coins (#1-#12)'
50 PRINT 'of which at most 1 might be a little'
60 PRINT 'heavy or light. Decide which one'
70 PRINT '(if any) is different. I will identify'
80 PRINT 'the unusual coin after three questions.'
90 INPUT 'Press RETURN to start ':RT$
100 DIM L(3,4),R(3,4),S(12)
110 FOR A=1 TO 3
120 L(A,1)=5
130 R(A,1)=5
140 NEXT A
150 FOR N=1 TO 12
```

```
160 D=N
170 S(N)=(ABS(N-9)*(2 OR N=12))*2+1
180 FOR A=1 TO 3
190 Q=INT(D/3)
200 T=D-3*Q+1
210 QQ=INT(T/3)
220 T=T-3*QQ-1
230 D=(D-T)/3
240 IF T<>-S(N) THEN 270
250 L(A,1)=L(A,1)-1
260 L(A,L(A,1))=N
270 IF T<>S(N) THEN 300
280 R(A,1)=R(A,1)-1
290 R(A,R(A,1))=N
300 NEXT A
310 NEXT N
320 SU=0
330 FOR A=3 TO 1 STEP -1
340 PRINT
350 PRINT
360 PRINT 'WHICH SIDE IS HEAVIER?'
370 FOR C=1 TO 4
380 PRINT L(A,C),R(A,C)
390 NEXT C
400 PRINT 'TYPE IN THE NUMBER: -1=LEFT +1=RIGHT'
410 INPUT '0=EQUAL ':AA
420 SU=3*SU+AA
430 NEXT A
440 AM=ABS(SU)
450 PRINT
460 PRINT
470 PRINT 'THE ANSWER IS:'
480 IF AM>12 THEN 580
490 IF SU<>0 THEN 520
500 PRINT 'ALL THE COINS ARE THE SAME'
510 GOTO 590
520 PRINT 'COIN #':AM;' IS ';
530 IF S(AM)*SU<=0 THEN 560
540 PRINT 'HEAVY.'
550 GOTO 590
560 PRINT 'LIGHT.'
570 GOTO 590
580 PRINT 'YOU MADE AN ERROR!'
590 PRINT
600 INPUT 'PRESS RETURN TO PLAY AGAIN ':RT$
610 GOTO 320
```

* * * * *

A "Look Ma, No Hands" Log On

by John H. Johnson

The following describes a macro-accession methodology that enables users of Reachout software to do an automatic log on to the BAMDUA SBBS (Bay Area Micro-Decision (Morrow) Users' Association). With a single keystroke, one can



make a beautiful run right down to the goal of the COMMAND prompt!

Users (Joe or Jane Doakes) are presumed to be "registered" BAMDUA SBBS users and for them to do the "Look Ma, No Hands" log on, it is necessary for a User Number to have been assigned to the Doake's listing. Let's make it JD25.

Doakes has chosen the personal password, "trouble".

It's also assumed that Doakes knows how to compile the Reachout telenumbers array, and that the BAMDUA-board has been programmed into the A slot of same.

Then, coming off from the D menu choice, the following sequence will take Doakes right where he or she wishes to go within the sanctum of the BAMDUA SBBS:

A=w?0!^Ccw" user
number" JD25cw:troublecw:00/00/00cw00:00cwbe

When (mercifully) a timing-device becomes incorporated into the BAMDUA SBBS, the date and time-stamp part of the coded sequence can be eliminated. Or, electively, Doakes may choose to foreshorten the full automatic log-on.

Even with Reachout manual assistance, writing the line of symbols was very "tricky"! It can readily be extrapolated for application to other RBBS-RCP/M systems, and it's, legitimately, my submission to the Public Domain, July 1985.

Notes:

1. Phone number to access BAMDUA is (415) 654-3882.
2. Reachout uploads to and downloads from Metal-Message RBBS-RCP/M systems works well with #3 (CRC) protocol in engagement.
3. Reachout is a proprietary modem program produced by:

Applied Computer Techniques:
21 Cottonwood Drive
San Rafael, CA 94901
(415) 459-3212

* * * * *

Diskmapping

by Frank Dunaway

In working with DU-V77, Disk Doctor, Power! and other such utilities, one may need to keep a record of the Allocation Groups, Tracks, Sectors, related to a specific file. One way is to scribble these down as they are found in searching a directory. Another way is to enter the information on a structured data sheet that helps the user to maintain accuracy in a tedious task.

DISKMAPD.CAL (double density) and DISKMAPS.CAL (single density) were created to fill this need. They work for me and if you go exploring the hills and valleys of tracks and sectors, they may aid your search.

Both files are SuperCalc spreadsheets. They will print on one 8-1/2" x 11" sheet using 12 pitch. For DISKMAPD, be sure to set the paper so that the first line will be very near the top of the page. This way, the last line will not spill over to the next page.

To print, use SuperCalc. Make sure that your printer is initialized for 12 characters per inch. Load the desired spreadsheet into memory with SuperCalc and delete the border (/G,B). Print, using the output command (/O,D,P).

You may want to change these forms to suit your own needs, rearrange columns, etc. If so, SuperCalc can move things around easily.

* * * * *

Setting Up a Comparison of SC and Lotus

Values and Formulas

by Marianna van Erp

Programs that "document" spreadsheet formulas have as their main feature the ability to print formulas in the same position that their values occupy on the screen.

The programs have words relating to "audit" and "document" in their titles, e.g., *Spreadsheet Auditor by Consumer Software* and *DocuCalc by Micro Decision Software*. Though they offer more than just the ability to compare formulas with their values, their promoters capitalize on the misconception that SuperCalc and Lotus 1-2-3 allow only a-one-formula-per-line listing. If this is the reason you are tempted to buy auditing software, try the following.

In SuperCalc, load a copy of a spreadsheet. /G(lobal) F(ormulas) will cause every cell which contains a formula to display it. If formulas are truncated, increase column widths.

Print this display with /O(utput) D(isplay) All P(rinter). Or print this file to D(isk) rather than P(rinter) if you want to add further explanations with a word processor. Another /GF will bring back the normal display of values.

A refinement for comparison is doing a /W(indow) V(ertical) command, changing one window to formulas with /GF and scrolling the windows until identical columns are side by side. This display can be printed if you have a print screen program, e.g., SNAPSHOT.COM on FOG/EX1.022.

Setting up a comparison of LOTUS 1-2-3 formulas and their values is not quite as straightforward. 1-2-3 does not print row numbers and column letters so comparing pages is more difficult. Save Column A and Row 1 in future spreadsheets for entering row numbers and column letters if they are needed.

Load a copy of a 1-2-3 spreadsheet and type /R(ange) F(ormat) T(ext). Formulas will display. Adjust column widths. Print this display with /P(rint) P(rinter) R(ange) range answer G(o).

To redisplay values either erase the worksheet and reload or use /R(ange) F(ormat) R(eset).

I have not tested the following two presumptions.

- 1) The /RFR command will cause cell formats to revert to 1-2-3's defaults, so special formatting must be redone.
- 2) Window comparison displays can be printed with the print screen command.

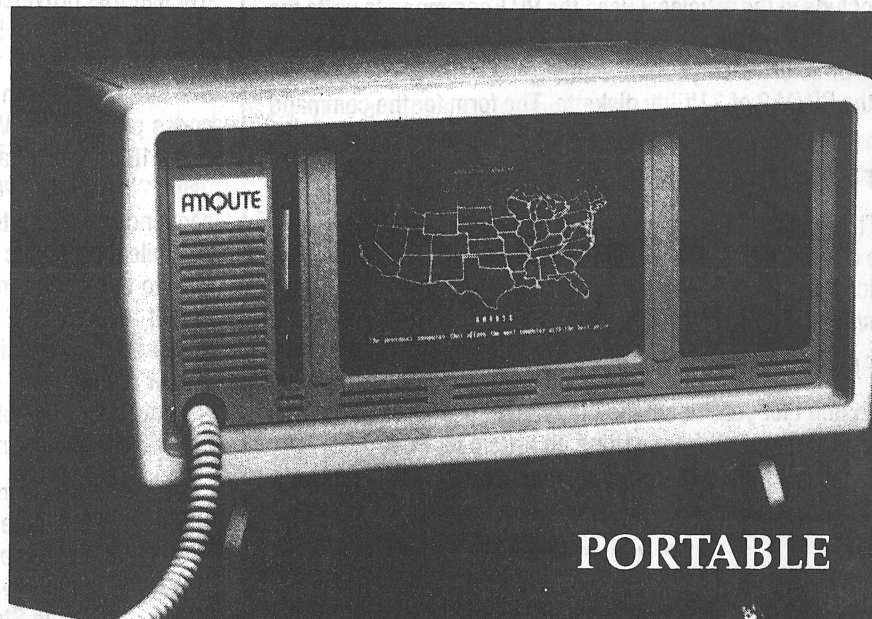
* * * * *

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Writing the Screen to a File on the Executive

by Bill Staley

There are various times when it would be nice to get the screen display to be written to a file. Good examples of this are my recent articles on DU-V8.6. Instead of trying to type the various pieces of information that DU presented that I wanted to include in the articles, I used the PUT command to write the screen to a disk file. Another use for this is to make a file of your directories so you can catalog them. PUT.COM is found on the CP/M 3 of 3 Utility diskette. The form for the command is:

PUT CONSOLE TO FILE filespec [options]

The filespec can contain the disk drive, i.e., **B:filespec.ext**. The option I use to make a file of multiple screens is [system] which will put all console output to the file until the next PUT command. To return to "normal" use the format:

PUT CONSOLE TO CONSOLE

So don't let your reluctance to type all those screens of information keep you from writing an article for FOG.

[For CP/M 2.2, I/O-CAP on FOG/UTL.033 will perform a similar function. Editor.]

Getting the Most Out of WordStar's Print Control Features

by C. David Bailey

This article tells you how to use the WordStar INSTALL (or WINSTALL) program to gain full control of all of the print control features provided by your printer without being limited to those normally provided by WordStar.

The basic idea is to run INSTALL (or WINSTALL) to assign the hex code for the ESC key to one of the user-definable codes provided by WordStar. In my case, I assigned the hex code 1B to WordStar's USR1 field. This field is invoked by using ^PQ (control PQ, i.e., ESC) as a prefix to the print control sequence you wish to send to the printer.

While the specific print control codes shown below are specific to the C. Itoh model 8510 (ProWriter) printer, the above use of the INSTALL program will allow you to use the print codes that are specific to your printer and described in your printer manual.

In my case, (C. Itoh 8510 printer), I use the following codes to get the indicated results (^ means control):

^PQP	Proportional Type Face
^PQN	Pica Type Face
^PQE	Elite Type Face
^PQQ	Compressed Type Face
^PQ!	Double Strike On
^PQ"	Double Strike Off
^PW	Wide On
^PE	Wide Off
^PQX	True Underline On
^PQY	True Underline Off
^PQT18	88 lines per page instead of 66 (six lines per inch)
^PQT24	Restores 66 lines for page (eight lines per inch)

Also available are:

^PQ#	Graphic character set on
^PQ&	Greek character set on
^PQ\$	ASCII character set on

Please note also the difference between the standard WordStar underline using ^PS and the true underline obtained with ^PQX above.

Please note that one can combine codes to obtain variations such as:

Wide Proportional
Wide Pica
Wide Elite
Wide Compressed

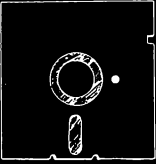
and:

Wide Proportional with Double Strike
Wide Pica with Double Strike
Wide Elite with Double Strike
Wide Compressed with Double Strike

Please also note that ^PQ! causes the printer to double-strike on a single pass (at half speed). This gives crisper double-struck characters than either the WordStar ^PD or ^PB

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commands, which invoke multiple printings of each line. It is sharper because the paper cannot shift between the first and second passes of the print head. Additionally, it allows double-struck proportional characters which are scrambled by ^PD and ^PB.

How to install for WS 2.26:

A) **INSTALL** ↵ (↵ means Carriage Return)

A) normal installation? **N** ↵

A) selection? **B** ↵

A) are modifications complete? **N** ↵

To define ^PQ as ESC key:

A) location to be changed? **USR1**:↵ Note: colon must be entered.

A) new value? **01** ↵

A) location to be changed? ↵

A) new value? **1B** ↵

To define ^PW as wide on:

A) location to be changed? **USR2**:↵

A) new value? **01** ↵

A) location to be changed? ↵

A) new value? **0E** ↵

To define ^PN as wide off:

A) location to be changed? **USR3**:↵

A) new value? **01** ↵

A) location to be changed? ↵

A) new value? **OFF**

How to install for WS3.3:

A) **WINSTALL** ↵

Select the Printer menu (**Option B**)

Select option for User Defined Functions (**Option 0**)

When you are asked to define user functions:

#1, #2, #3,

be sure to enter a comma before the hex code as specified in the instructions on your screen. The following setups will work:

USR1	,1B↵.↵	ESC
USR2	,01↵,0E↵.↵	Wide On
USR3	,01↵,0F↵.↵	Wide Off

* * * * *

A Sideways Program

in TURBO Pascal

by Doug Cox

I always wanted a Sideways-type program. That's one that will print anything on the printer as though it was turned sideways. There's one available for the IBM and Apple, but none for CP/M computers, to my knowledge. So I finally wrote one.

I have an Osborne Vixen, TURBO Pascal, and a

Mannesmann Tally Spirit printer (all of which are great). I wrote the program in TURBO Pascal, and it is specific to the Mannesmann Tally. However, aside from the printer ESCAPE codes (and maybe the graphic representations), it should work on any CP/M computer.

I didn't want to write the specific code to make the program work on all the different dot matrix printers, so this article aims to help others write similar programs for their printers. (I claim copyright to this specific program and don't intend that anyone would sell a modification of it for profit.) It should be simple to change the printer ESCAPE codes (which tell the printer to enter graphics mode, etc.), and to modify (if necessary) the graphics codes for each different printer.

The program (SIDEMT.COM for the Mannesmann Tally) and the source code (SIDEWAYS.PAS) are in the FOG library on FOG/CPM.009.

The pascal program (without the error-trapping routines):

```
program SIDEWAYS;
type
  lineNo=1..80;
var
  line: Array[lineNo] of String[255];
  y: LineNo;
  longest, chNo, bottomLine, x: Integer;
  fileName: String[14];
  fileVar: Text;
begin
  read (FileName);
  read (bottomLine);
  Assign (fileVar, fileName); Reset (fileVar)
  while not EOF (fileVar) do
    begin
      y:= 0; longest:= 1;
      while (not EOF (fileVar)) and (y < bottomLine) do
        begin
          y:= y + 1;
          readln (fileVar, line[y]);
          if Length (line[y]) > longest then
            longest:= Length (line[y]);
        end;
      x:= y;
      if y*8 > 511 then n2:= 2
      else if y*8 > 255 then n2:= 1
      else n2:= 0;
      n1:= y*8 - (256 * n2);
      for chNo:= 1 to longest do
        begin
          write (Lst, ^[, 'K', chr(n1), chr(n2));
          for y:= x downto 1 do
            if chNo < Length(line[y]) + 1 then
              begin
                case line[y][chNo] of
                  'A': write (Lst, #$00#$81#$81#$FF#$81#$42#$24#$18);
                  'B': write (Lst, #$00#$FC#$42#$42#$7C#$42#$42#$FC);
                  (* etc *)
                end;
              end;
```



```

end
else write (Lst, #0#0#0#0#0#0#0)
end;
end;
end.

```

If you don't know Pascal, I recommend it highly, especially TURBO Pascal. It's almost as easy as BASIC, and MUCH better.

In the program, "lineNo" is a subrange of integer-type that is used by the variables **y** and **line**. The greatest number of columns that would fit on my printer is 80. Usually, if a file is wide enough to be printed sideways, it wouldn't be longer than 80 lines.

Since this program will probably only be used with SuperCalc files, and can only read a SuperCalc .PRN file, i.e., an ASCII file (as opposed to it's original SuperCalc .CAL file, which is in binary code), it requires that the user input the bottom line number from the original .CAL file. The reason for this is when you create a .PRN file from a .CAL file (using SuperCalc's /Output, Display, to Disk option), SuperCalc cuts the original SuperCalc .CAL file into lines as long as the printer width setting in the user's SuperCalc program (255 is maximum), and continues those lines under the first group, and so on. So the program needs to know how far to move down the SuperCalc .PRN file to print the next group of lines and thus make continuous printout).

The two "while" statements (one within the other) handle the problem by repeatedly reading the file (with a reinitialized variable **y**) until "bottomLine" is reached each time, and then printing until the end of the file (EOF).

The variable "longest" is used to quit printing after the longest line has been printed. The variable "chNo" is the sequential number of a character in the string variable **line**.

To print graphics, the Mannesmann Tally requires an ESCAPE character ("I), an A, and the number of bytes that each line of graphic characters will require. The number of bytes is represented in the program by the variables **n1** and **n2**. The Mannesmann Tally needs the number of bytes in a slightly complex format, which is the purpose of the part of the program that figures the variables **n1** and **n2**.

The two for statements (one within the other) print the first character of each line (starting with the last line), and then the next character, and so on.

I only included two letters in the "case" statement (which is similar to an "if" statement) as an example of the format. The full "case" statement was the hard part of writing this program, since it turns each letter sideways using graphic input to the printer. The eight bytes used to make the sideways letter are in hexadecimal. I worked with hex since it's the most direct representation of binary numbers.

On the Mannesmann Tally, graphics are printed using eight vertical ink holes that are opened or closed depending on whether each of eight bits of a byte sent to the printer is 1 or 0. This byte is two binary numbers, represented by a pair of single hex numbers. The first hex number in each pair is for the top half of the eight bits, and the second is the bottom half.

Each letter has been given eight bytes to fill it out, so the graphic is 8 by 8.

I used the following chart to choose the hex number:

0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1
0	0	0	0	1	1	1	1	0	0	0	0	1	1	1	1
0	0	1	1	0	0	1	1	0	0	1	1	0	0	1	1
0	1	0	1	0	1	0	1	0	1	0	1	0	1	0	1

Call or write if you have any comments or questions.

Doug Cox
140 Monroe Dr.
Palo Alto, CA 94306
(415) 949-0624
* * * * *

Communications Between the TRS-80 Model 100 and Your Ozzie by Rick Pederson

Inspired by articles in the *FOGHORN* detailing how to dump files from the Radio Shack Model 100 portable computer to an Osborne, I recently purchased one of those portable gems. My idea was to use the Model 100 as my truly "portable" computer in the field and capture ideas and data as they occurred.

My trusty Ozzie, while transportable, proved too heavy and clumsy to lug around. Also, Ozzie was starting to gain extra weight with external monitors, modems, etc. Her proper place seemed to be at my workstation, not in the rough.

Armed with the Myterm modem software part of the CTS modem package (remember the deal?) and some patience, I finally worked out a method of transferring text files from the Model 100 to the Osborne in a form that WordStar could work on directly. Here's what I did:

1. Secure a patch cord with RS232C male plugs on both ends. I made my cable from Radio Shack parts (I must own at least half of the store by now) and wired it straight with no twists. I didn't need a null modem adaptor as Radio Shack advised. Be sure the switch on the side of the Model 100 is set to DIR not ACP. Plug both computers together before powering up.
2. Detach the modem cable from the CTS modem. Now turn on both computers.
3. Insert a blank, formatted disk in drive B, and Myterm in drive A and fire up the system.
4. Set up parameters on Myterm as follows:

Baud rate	1200
Data bits	7
Parity	Even
Stop bits	1
Role	Answer
Mode	Full

Next I went into the option submenu and changed Direct Connect Mode to ON. I saved these parameters to a file called DIRORG.PAR as the Myterm manual suggested. Now, every time I want to communicate computer to computer, I simply load the DIRORG.PAR file using the Load feature of the main menu.

5. At the main menu, enter **D** for Text File Download. Once in this submenu, enter **C** to shift into the capture mode. You will be prompted for a file to dump to, which I enter as B:FILENAME.EXT since I want the files to be saved on the blank formatted disk sitting in drive B. To make it easy to remember the files, I usually call the file the same name as was used in the Model 100. Now exit back to the main menu to start communications.

6. We need to work on the Model 100 next, (people looking over your shoulder are usually impressed as you hack on, not one, but two computers). Make a note of the file you wish to upload to the Osborne and then shift into the Telecom program.

7. Set your STAT to 57e1e,10 (fifty-seven edward one edward comma ten). Don't overlook the comma; it's very important. If you check in the Model 100's manual, this simply sets up the Telecom parameters to match the parameters already set in the Myterm program.

8. Put the Model 100 in the Terminal mode and specify Upload. At the prompt, type in the selected file you want to transfer. You can then specify the width of the file — I use 65 since it prints out nicely. Type in your width but don't press ENTER yet!

9. Enter **G** to start communications on the Osborne (the other computer on your table). Now press ENTER on the Model 100. You should see the two screens echo print the contents of the desired file. If not, something goofed up. Be sure all cables are properly connected, that all software has been set up correctly, and that the switch on the side of the Model 100 is set to DIR not ACP.

10. When the transmission is over, you can close the captured file and write it to disk by either exiting to CP/M (Myterm doesn't let you forget to close files — it does it for you automatically) or by reentering the Text File Download menu and entering **W** for Writing the Data to Disk. I use the last method when I have more than one file to transmit, and I use the first method when I have finished transmitting files and want to start work on them.

11. Once the files are transferred, you can use WordStar to modify and print them out. The only quirks I have noticed so far is that occasionally a leading character is cut off after a double carriage return and right margin justification is uneven. But these can be easily cleaned up and additional text and headings added using WordStar's super features.

This works quite nicely for my needs and allows me to use my Osborne for what it is best suited to, while the Model 100 supplements Ozzy's power.

As just a bonus tip: I was saving files on the Model 100 to cassette storage (a real pain; so thank goodness for the disk drive) and found that chromium oxide (chrome) tapes and a cheap cassette work just fine for this. Don't pay outrageous prices for "computer" cassettes or recorders — buy chrome tapes on sale and use the cassette you already own. They work just as well.

* * * * *

Firmware Development

Using the Osborne 1

by Tom Farmer

In addition to my regular employment, I occasionally accept technical assignments from firms doing business in the area of radio communications. These usually range from defining communication systems through to designing prototype hardware.

Because my clients frequently are not in the same city as my residence, I attempt to minimize the amount of time I have to spend at their plants. One way I have found to do this is to use my Osborne 1 as much as possible to simulate the system at various stages of development.

While the details of what these systems do is certainly beyond the scope (and interest?) of most *FOGHORN* readers, the techniques I use can be transferred to many other applications.

The first task in system development determines what parameters are critical in the design. Many of these questions can be answered using a discrete-time simulation of the entire system in MBASIC. For example, a mixer (RF type, not audio) can be simulated by the statement:

```
10 SIGNAL = SIN(FREQ1*TIME) * SIN(FREQ2*TIME)
```

Gaussian white noise can be simulated using the **rnd** function and algorithms based on the Central Limit Theorem of statistics.

After the optimal system parameters have been determined, the next task is to design the hardware. In most of the situations I have encountered, the majority of the engineering development effort is devoted to firmware. (Fortunately, I usually have been able to use an 8505, though external flash-multiplier chips are often required.) While the hardware development is usually pretty straight forward, bugs may be difficult to diagnose using traditional target hardware and emulator techniques because the problem may be hardware, software or mathematical in nature.

This is where the previously-mentioned simulation comes in handy. It contained a known working model of the system, thus the mathematics behind the system were correct and it was possible to make it work. If the firmware can be developed independently of the hardware by using the simulation, and if the hardware can be verified using simple diagnostics, then the only reason the final system won't work is if there is a problem in the hardware/firmware interface. By writing the



firmware in modular form, these interface problems can be quickly diagnosed and corrected.

Since the Z80 in the Osborne can execute the same machine code as an 8080, I write the code for the ASM assembler. The few instructions needed that are not assembled from mnemonics can be written using **DB** definitions and the machine code equivalents.

The next task is to validate the firmware. I write it using only relative addressing. I put an **ORG** to **A000** before the program selection and **ORG** to **A800** before the RAM section. The firmware that is sent to the target hardware will be identical to the validated version except for these two **ORG** statements (and any hardware interface modules). I always end the assembly process with the object code in the file **HEX.HEX**. The simulation and the firmware are loaded into the Osborne's memory using a function key I have programmed as follows:

```
DDT
IHEX.HEX
R
^C
MBASIC /M:&H9FFF
```

where **^** means control.

In **MBASIC**, I then load the simulation and modify it to call the firmware. **IPEEK** and **IPOKE** are used to pass data between the simulation and the firmware. The firmware is integrated in a bottom-up fashion, gradually replacing **MBASIC** statements in the simulation with the corresponding firmware code. In the end, all of the firmware is integrated with the simulation generating the inputs, reporting the outputs, and simulating the hardware. In the meantime, the assembly language firmware does exactly what it will do in the target hardware.

The remaining tasks are to validate the hardware and to integrate it to the firmware. The Osborne's portability even makes it possible to take the simulation with me to the customer site in case anything unexpected arises.

The advantages of this technique are numerous. First, most of the work can be done at my home which minimizes the amount of travel. Second, by separating the hardware and software tasks, the system can be integrated and functioning in a minimal amount of time. This technique has been so successful that I have been able to bring up complicated equipment — such as a real-time FFT signal processor — in as little as one weekend.

I doubt the average **FOGHORN** reader is involved in this kind of esoteric work. However, the technique of writing something in **MBASIC** and then gradually translating it to assembly language is useful in many applications.

* * * * *

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A Foolproof MBASIC

Filename Routine

by Alan Chattaway

I recently wrote an MBASIC program that needed to get a filename from the user. It was essential that it be user-friendly, as the intended user had no experience with any programs other than word processors. My subroutine FILENAME.BAS (submitted to the FOG library) proved ideal, and can easily be adapted to terminals other than the Osborne 1.

```
9000 'Universal subroutine that returns filename obtained from
      user as FYLE$
9010 '(uses other subroutines located at end to customize for
      your terminal)
9020 RESET
9030 '
9040 'Clear screen first
9050 GOSUB 10050
9060 '
9070 'Give instructions
9080 PRINT:PRINT:PRINT 'Please give both DRIVE and FILE
      names.'
      :PRINT
9090 '
9100 'Initialize variables
9110 LTR$='':TYPFLG=0:LTRCNTR=0:FYLE$='''
9120 '
9130 'Ask for drive name first
9140 PRINT:PRINT:GOSUB 10110 'clears line
9150 PRINT 'Which DRIVE? (A or B)'
9160 DRIVE$=INKEY$:IF DRIVE$=''' THEN GOTO 9160
9170 '
9180 'Make it upper case, check if valid drive
9190 DRIVE$=CHR$(ASC(DRIVE$) AND &H5F)
9200 IF DRIVE$='A' OR DRIVE$='B' THEN GOTO 9260
9210 '
9220 'Wrong answer; go back 1 line up screen and ask again
9230 GOSUB 10130:GOTO 9150
9240 '
9250 'Right answer; go back up screen 1 line and ask for file
      name this time
9260 GOSUB 10130
9270 PRINT 'Which FILE? (give name) ''+DRIVE$+'':
9280 '
9290 'Get one character of FILENAME/FILETYPE from keyboard
9300 LTR$=INKEY$:IF LTR$=''' THEN GOTO 9300
9310 '
9320 'User is finished when he/she types (RETURN)
9330 IF LTR$=CHR$(&HD) THEN GOTO 9870
9340 '
9350 'Banish illegal characters!
9360 IF LTR$=': OR LTR$=';' OR LTR$=' ' OR LTR$='$'
      THEN GOTO 9300
9370 IF LTR$='(' OR LTR$=')' OR LTR$='?' OR LTR$=', '
      THEN GOTO 9300
```

```
9380 IF LTR$='*' OR LTR$='[' OR LTR$=']' OR LTR$=' '
      THEN GOTO 9300
9390 IF LTR$=CHR$(34) OR LTR$=CHR$(39) OR LTR$=CHR$(12)
      THEN GOTO 9300
9400 IF LTR$=CHR$(11) OR LTR$=CHR$(10) OR LTR$=CHR$(9) THEN
      GOTO 9300
9410 '
9420 'If user did NOT type a period, treat it as normal character
9430 IF LTR$(<)'.' THEN GOTO 9490
9440 '
9450 'User typed a period; either wants to enter FILETYPE or
      it's an error
9460 IF (TYPFLG=0 AND LTRCNTR<1) OR TYPFLG=1 THEN GOTO 9300
9470 LTRCNTR=0:TYPFLG=1:GOTO 9850
9480 '
9490 'See if user is trying to delete a letter
9500 IF LTR$=CHR$(127) OR LTR$=CHR$(8) THEN GOTO 9580
9510 '
9520 'FILETYPE can't exceed 3 characters, so stop listening to
      keyboard
9530 IF TYPFLG=1 AND LTRCNTR>3 THEN GOTO 9300
9540 GOTO 9770
9550 '
9560 '<DELETE> wanted; if at start of FILENAME, user must want
      to delete
9570 'the drive name, so go back and ask for it again.
9580 IF (LTRCNTR>0 AND TYPFLG=0) OR (LTRCNTR>1 AND TYPFLG=1)
      THEN GOTO 9700
9590 IF TYPFLG=0 THEN GOSUB 10130:GOTO 9130
9600 '
9610 'If at start of FILETYPE, user must want to return to
      FILENAME
9620 'so delete '.'' from screen and FYLE$, and reset LTRCNTR
      and TYPFLG
9630 GOSUB 10170
9640 FYLE$=LEFT$(FYLE$, (LEN(FYLE$)-1))
9650 LTRCNTR=LEN(FYLE$)
9660 TYPFLG=0
9670 '
9680 'Not at start of FILENAME or FILETYPE, so delete last
      character
9690 'typed from both screen and FYLE$.
9700 GOSUB 10170:LTRCNTR=LTRCNTR-1
9710 FYLE$=LEFT$(FYLE$, (LEN(FYLE$)-1))
9720 '
9730 'After deleting, go back for another character
9740 GOTO 9300
9750 '
9760 'For normal characters, fix lower to upper case
9770 IF ASC(LTR$)<&H7B AND ASC(LTR$)>&H60 THEN
      LTR$=CHR$(ASC(LTR$) AND &H5F)
9780 '
9790 'If 8 characters already entered, automatically switch
      from FILENAME
9800 'to FILETYPE and insert period; otherwise get another
      character
```

```

9810 IF LTRCNTR<8 THEN GOTO 9850
9820 LTR$='.'+LTR$:LTRCNTR=1:TYPLG=1
9830 '
9840 'Print character, add to FYLE$, increment character
      counter and return
9850 PRINT LTR$,:FYLE$=FYLE$+LTR$:LTRCNTR=LTRCNTR+1:GOTO
      9300
9860 '
9870 'Now join Drive and File names with colon between, ready to
      call the file
9880 FYLE$=DRIVE$+'':'+FYLE$
9890 PRINT:PRINT ''Your file name is now: ''+FYLE$
9900 '
9910 'Ask user if this is correct
9920 PRINT:PRINT '' Is this correct? (Y/N)''
9930 PRINT ''(or <RETURN> for Yes)''
9940 CONFIRM$=INKEY$:IF CONFIRM$=''' THEN GOTO 9940
9950 IF CONFIRM$='Y' OR CONFIRM$='y' OR
      CONFIRM$=CHR$(8) THEN GOTO 9980
9960 GOTO 9050
9970 '
9980 'End of subroutine that gets filenames from user
9990 RETURN '(to main calling program)
10000 '
10010 '-----
10020 'The following subroutines are all that needs to be
      changed to run this
10030 'program on other computers. Values below are set for the
      Osborne 1.
10040 '
10050 '-----
10060 '
10070 'Subroutine to clear the screen and home the cursor
10080 PRINT CHR$(26);
10090 RETURN
10100 '
10110 '-----
10120 '
10130 'Subroutine to go back one line up screen and erase to end-
      of-line
10140 PRINT CHR$(11)+CHR$(27)+CHR$(84);
10150 RETURN
10160 '
10170 '-----
10180 '
10190 'Subroutine to go back one character to the left and erase
      to end-of-line
10200 PRINT CHR$(8)+CHR$(27)+CHR$(84);
10210 RETURN

```

* * * * *

Patching WordStar to Set Up Printer Control Strings

by Dick Ezzard

Many people still have not fully exploited the potential for control over WordStar printing output which is made possible by patching WordStar.

Every user should establish a complete collection of printer control strings which are sent to the printer when WordStar encounters particular printer control characters embedded in the file it is printing. These allow the user to directly control turning on and off printer features by placing WordStar printer control characters at appropriate locations within the file to be printed. WordStar allows for 10 possible strings of up to four bytes each.

Six of these strings operate in straight forward fashion. A control character placed in the file will trigger transmitting a particular string located at a certain WordStar (version 2.26) patch address. The following table shows these:

Control Character in File	Triggers Code Located At	
^A	PALT	06B5
^N	PSTD	06BA
^Q	USR1	06C9
^W	USR2	06CE
^E	USR3	06D3
^R	USR4	06D8

WordStar has designated some of these printer feature control strings as controlling specific features: ^A is supposed to be used to set alternate character width for non-daisy wheel printers and ^N to reset standard character width.

The user is free to disregard these designations and use the available printer control strings to control any desired printer feature as they all operate in the same way to communicate with the printer. When WordStar encounters one of the designated printer control characters in the file it is printing, it refers to the patch area to determine what string of control characters to send to the printer at that time and then sends them.

(Installing WordStar to work with a particular printer may cause some hex codes to be automatically installed at some patch locations. If you designate some daisy wheel printers, for example, the INSTALL program will take care of some printer patches for you. For the rest of this discussion, we are considering control of an Epson MX-80 printer, a quite common piece of equipment.)

Each control string patch starts with a byte which designates the number of control characters to be sent to the printer. Then there is room for up to four hex characters. Your printer manual tells you what strings control which printer features and it is possible to turn on more than one feature with one WordStar printer control character. For example, it is feasible to have ^A turn on both double width and compressed character features to arrive at a type font which is wider than normal but not so very blatant as double-wide.



It is also possible to send more than four hex bytes at the instigation of one WordStar printer control character but you must be aware that so doing impinges upon the area reserved for the next patch and wipes it out! For example, if you patch the area reserved for ^E (USR3) to send a string of seven hex characters to the printer, then ^R (USR4) is no longer usable and should a ^R be encountered in a file during printing, the effects are unpredictable and could trash the print job.

The other control strings operate in slightly more complicated fashion than the six straight forward printer control areas mentioned. WordStar's printer control character ^Y operates as a toggle switch by sending one control string the first time it is encountered and sending another string the next time, then alternating back to the first string.

Control Character in File	Triggers Code Located At	
^Y (first time)	RIBBON	06DD
^Y (second time)	RIBOFF	06E2
^Y (third time)	RIBBON	06DD
^Y (fourth time)	RIBOFF	06E2

etc.

^Y is useful to turn a function such as italics or compressed print on and then off.

The operation of control characters ^T and ^V is conceptually even more complicated as they operate in a tandem toggle fashion. The second time ^T is encountered it will send to the printer the code installed at the position for ^V and vice versa! So it is important that the control strings installed to work with ^T and ^V be complementary to each other.

Control Character in File	Triggers Code Located At	
^T (first time)	ROLUP	06BF
^T (second time)	ROLDOW	06C4
^T (third time)	ROLUP	06BF
^V (first time)	ROLDOW	06C4
^V (second time)	ROLUP	06BF
^V (third time)	ROLDOW	06C4

etc.

These controls were originally designed to control partial rolling of carriages on some printers so that characters could be printed as subscripts or superscripts. You use one of them to roll the carriage up or down, then repeat the same control character to recover the carriage to normal position.

If used for some other function, such as to invoke and turn off the Epson superscript font, it is best to use ^T as a simple toggle to turn the feature on and off in the manner of ^Y, and just forget about using ^V. (Note that the Epson superscript font is a special font which prints on the top half of the line and does not involve rolling the carriage at all.)

Which Printer Controls?

WordStar is tight on space for printer controls and many users will feel cramped by the necessity to limit themselves to the use of 10 favored printer features. The Epson series of printer has scores of controls which can be utilized and the

greedy user will want to be able to use them all in one file, even if only as a stunt. Sorry.

A reasonable degree of freedom can be gained if the user makes up "sets" of 10 features which will be used together, and then patches different versions of WordStar with different feature sets to handle different jobs. Then the user can choose whether to call up WS2.COM or WS3.COM according to which set of printer features he wants to employ. Disk space permitting, several versions of WordStar may be kept on the same disk to work with one WSOVLY1.OVR and MERGPRIN.OVR.

Even though it adds somewhat to complexity, the user may be able to get mileage out of the fact that nothing happens, i.e., there is no harm done, if you turn off a feature that is already off or turn on a feature that is already on. One patch which is designed to turn off three features can be used to turn off any one of the three which is on, any two of the three, or all three. For example, a patch to turn off double-wide print AND turn off compressed characters will:

- turn off double wide if on; ignore if not.
- turn off compressed if on; ignore if not.
- turn off both compressed and double-wide if both are turned on.

So in a small way, multiple features can be controlled with one printer control character, i.e., a one patch job.

Don't forget that besides the 10 strings available for user patching, there are other printer features which can be triggered by control characters inserted in a file:

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United States of America

Membership number: _____

Name: _____

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Please write clearly and give FOG 4 weeks notice to ensure uninterrupted delivery. FOG cannot be responsible for undelivered **FOGHORNS**.

* * * * *

[^]S underscore toggle
[^]B boldface toggle
[^]D double-strike toggle
[^]X strike out toggle
[^]H backspace and overprint

If you count these, count combined effects, and have a couple of multiple feature patches, a well thought-up patching plan can control perhaps 20 printer effects.

A Favorite Set of Printer Features

The following lists the codes to control printer features which can be installed to control an Epson MX-80F/T printer with the Grafrax Plus option. The feature selection is arbitrary and may or may not correspond to what you want to do. Of course, other printers will require different codes to trigger similar features. This listing is presented as an example:

Label	Address	Hex Value	WordStar Printer Control Character
PALT	06B5	01	[^] A Compressed characters on
		0F	
PSTD	06BA	01	[^] N Compressed characters off
		12	
ROLUP	06BF	03	[^] T Superscript font on
		1B	
		53	
		00	
ROLDOW	06C4	02	[^] V Superscript font off
		1B	
		48	
USR1	06C9	03	[^] Q Double-wide print on until turned off
		1B	
		57	
		01	
USR2	06CE	03	[^] W Double-wide print off
		1B	
		57	
		00	
USR3	06D3	03	[^] E 1/12 inch line spacing
		1B	
		41	
		06	
USR4	06D8	02	[^] R Restores 1/6 inch lines
		1B	
		32	
Label	Address	Hex Value	WordStar Printer Control Character
RIBBON	06DD	02	[^] Y Italics font on
		1B	
		34	
RIBOFF	06E2	02	[^] Y(2nd time) Italics off
		1B	
		35	
PSINIT	06E7	01	Sent automatically, print head to left side of paper
		0D	

(Note: many users have had trouble with some of these because the Epson manual, as originally published, gave the WRONG hex codes for some functions such as superscript and double-wide. Those who had such trouble should try

again, being sure to use the correct hex codes by carefully translating the decimal codes. Epson did publish the correct decimal codes.)

When invoking printer features it is OK to combine some of the printer control codes. For example, entering [^]A[^]Q turns on both compressed and double-wide to come up with a font which is larger than normal but not too exotic. Entering [^]T[^]E[^]A turns on superscript, 1/12 inch line spacing and compressed characters, which has the effect of printing in a tiny font. However, the combination of compressed, double-wide and superscript does NOT take on the MX-80 and experimentation may be necessary to determine whether other esoteric combinations are effective or not.

* * * * *

A Televideo PT as an Alternative to Another Executive *by Joel Bluming*

I have two Executive computers and a Trantor Hard Disk, and will soon be adding a WestWind Web Network. I found that I needed computers in other locations in the same building, but not all to be used at the same time. It occurred to me that I might use a dumb terminal off one of the Executives (leaving two more available slots in the network), and at less cost than another Exec.

I made many calls to find out if the idea was feasible. After many yes's and no's, I decided to purchase a Televideo PT (Personal Terminal) and give it a try.

I chose the PT because of its size. It measures 14"d x 12"w x 10"h, and fits neatly into the space I have. The screen is 9" and green amber in color. The cost was about \$550, which is not that much less than an O-1 computer, but I wanted to run on CP/M 3, and the O-1 would be too large for my space.

The terminal arrived with a user's guide, a power cord, and a toll free help number (the most useful accessory as it turned out). I had to make up a Null modem cable and a boot disk. I gathered the following setup information:

- 1) CABLING — Pins 1-8 and 20 wired "straight through" with RS232 male-pinned plugs, plugged into the PRINTER port of the Executive and the MAIN port of the terminal (crossing pins 2 and 3 would permit using the Modem port in the Exec).
- 2) SETUP — Run the Executive SETUP program and configure the PRINTER port as follows:
 - a) Baud rate — I chose 19.2K, but 9600 probably is better
 - b) Protocol — no protocol
 - c) Device — auxin:/auxout:
 - d) Initialization string — NONE
- 3) TERMINAL — After many phone calls and trials and errors, I found the following settings in the PT TERMINAL SETUP PROGRAM (which is built into the TERMINAL ROM and accessed from the Pterminal keyboard). From the terminal



you must first press the FUNCTION KEY called SETUP and then:

- a) Press the FUNCTION KEY called COMM and set;
 - i) Baud rate — 19.2K
 - ii) Parity — SPACE (no one had heard of it, but it works)
 - iii) D.Bits — 7 (note the Exec ref says 8 — WRONG)
 - iv) S.Bits — 1 (Stop Bits)
 - v) Mode — FDX (Full Duplex)
 - vi) Protocol — DTR
- b) Press the function key called Misc and set;
 - i) RETURN — CR (not CRLF as I thought)
 - ii) EDIT — DUPLEX
 - iii) SCROLL — ON

- 4) DEVICE — a) DEVICE CONIN: = CRT, PRNTR
b) DEVICE CONOUT: = CRT, PRNTR

Actually I set DEVICE CONOUT: = PRNTR, but this disables the Executive screen, so don't do this until everything works.

- 5) SETDEF — SETDEF [NOPAGE] because any CP/M+ utility that requires a return to page through (such as TYPE), or a large DIR[FULL]) will not work through the PT keyboard. Now you will use ^S^Q (control S, control Q) to scroll from the terminal with these programs.

After setting all of the above (and many frustrating attempts), lo and behold the PT came alive. The keyboard is a bit cramped but OK. Most of the work to be done with the terminal will involve accessing my data base, which is designed on Personal Pearl ®. The INSTALL.DAT file used to run WELCOME to install Pearl for your computer or terminal does not contain the installation codes for this particular terminal. But after investigating (more phone calls) I learned that there are similarities to the Osborne installation.

Open INSTALL.DAT with WordStar's non-document mode, or VDE (public domain text editor), and find the listing for the Osborne 1 (also used for the Exec). The first line of "code" reads as follows:

```
CLR = ESC 26 0 0 0 ESC )
```

Change it to read:

```
CLR = ESC * ESC 26 0 ESC )
```

Now run WELCOME on all your Pearl programs (DF, DR, ED, PR, FM). I run Pearl on my hard disk. This configuration will work on both the Executive and the PT since the Executive requires ESC 26 (27H 0AH) to clear the screen, and the PT requires ESC * (27H 2AH). All other codes are the same for the Exec and the PT.

One peculiarity: sometimes the Exec sends a code to the terminal which causes it to go into the "local edit" mode. Keyboard output goes to the terminal screen instead of the computer. I found that the code is ESC k (lower case k), but I do not know where it comes from yet. The command to reverse this in the terminal is ESC l (lower case l), so I set one function key on

the terminal to correct this (a nuisance but only rarely).

That's it. When I want to use the remote terminal I use a different boot disk which contains the setup information to configure the printer port for the terminal. I made a new EXECST.COM using EXAUTO.ASM to set all necessary parameters by substituting the following:

```
NEWPRG:DB 'DEVICE CONIN: = CRT, PRNTR! DEVICE
CONOUT:
= PRNTR! SETDEF [NOPAGE]'
(note the use of the ! to connect commands)
```

Save the changes (^KX from WordStar or ESC X from VDE), assemble (MAC EXAUTO), load (HEXCOM EXAUTO) and RENAME EXECST.COM = EXAUTO.COM. Now when I want to use the terminal I turn it on, insert the boot disk and press RESET, and then ↵ (return).

Additional Information

At 19.2K baud there is no noticeable time delay except when scrolling in WordStar. Any program which is machine-specific to the Executive will not work on the terminal (e.g., Setup must be run from the Exec BEFORE DEVICE or the system will lock up). I have not tried every one. NSWEEP will work except for the View function (no way to scroll). I expect that this can be corrected, but I do not have the .ASM file. Executive windows do not work as they lock up keys.

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AMQUTE IBM COMPATIBLE \$1475(2DSDD), \$2075(10M), \$2375(20M) I hate to say this, but I bought an IBM COMPATIBLE. It is about the same size as my OCC-I, has 704k, 9" (80 column) screen, 2 380k DSDD drives, and is 100% COMPATIBLE. Has a handle, so is PORTABLE. I haven't had it long, but have sold several of the 20 Megs. Everyone loves it.

OSBORNE KEYBOARD \$35 Don't spend \$150 to have yours repaired. Don't work around it. Send me \$35 and keep a spare in your closet (Does not include cable or case).

STUPIDITY MONITOR ADAPTER \$15 The box said OCC-1 VIDEO ADAPTER. I BID ON THEM. I GOT THEM. Works great. The only trouble is that it covers up the B pocket and you can't close the keyboard on the BLUE CASE.

FANCYFONT \$180 Do your own typesetting. This was set using SANS 18 bold and ROMAN 12 bold. Very slow but nice looking. I love it.

VEN-TEL MODEM \$150 300-1200 Auto answer, Auto dial MODEM. These are used, but like new. I include Modem cable and MDM740 for OCC-I, EXECUTIVE, or TPC1.

STROBE PLOTTER \$250 8 pen 8 1/2 x 11 DRUM PLOTTER. Use with LOTUS 1-2-3, DBASE III, AUTOCAD, uses HP-GL. Not \$800-\$995 (Most retail outlets). Not \$450 (My regular price). Not \$350 (My sale price). BUT \$250 (My hurting price).

AMDEK DXY100 PLOTTER \$250 1 pen 11x17 flat bed plotter. Includes SIGN MAKER, a program I wrote to do BUMPER STICKERS.

I PAY SHIPPING AND HANDLING. California Residents add sales tax. Your personal check is ok up to \$400. Above that, give me a call. My hours are 4am-9am.

The Executive version of VDE will not work, but again I suspect that the proper coding could be set up in the .ASM file.

WordStar will work, but has to be installed for the terminal. I have the terminal type as Televideo 925/950 but this is not perfect and I will have to modify some features. The arrow keys do not work yet.

Once installed properly, Personal Pearl works like it was born there.

The terminal has seven unshifted and seven shifted function keys which can be easily configured and are similar to IBM function keys. The 25th screen line shows the seven unshifted keys. However the Exec function keys do not work from the terminal.

The terminal comes with both User's and Programmer's Guides. There is a serial printer port included and phone input and output jacks to be used with an optional internal modem. (The terminal can be used as a stand-alone unit to access mainframe data bases). The terminal character set is NOT redefinable (it is in ROM) but there is an alternative set and a graphics set.

I have not tried every possibility yet. I was happy enough just to get it working. I intend using two more of these terminals at other locations, connected to one Exec with a four-way serial switch. Combined with the WEB Network hard disk, and three other Execs, it is quite a system.

I would be happy to assist anyone who wants to try this. I can be reached by phone Monday to Wednesday, 9am to 8pm and Thursday 9am to 4pm at (516) 791-2323, (I would call back "collect" if not available).

(Note:) Thanks to:

Yati and Robert at WestWind Computers (Trantor) — WEB, HARD DISK

Doug at G2 Systems — A TERRIFIC QUAD DENSITY UPGRADE FOR EXEC

Nyla at Pearlsoft — PERSONAL PEARL

Lowell at Microtech — INOVA MEMORY EXPANSION BOARD FOR EXEC

Eric at Televideo — PERSONAL TERMINAL

— for all their expertise and patience.

* * * * *

Documate Plus SFKs

by Leslie A. Bradshaw

The following sets of special function keys (SFKs) make easier preparation of files for tables of contents and indexing. MAKEKEY, a public domain program by James R. Bode, allows easy use of multiple sets of SFKs on the Osborne Executive through the R option at WordStar's main menu. See *FOGHORN* (September, 1984 p. 70 col. 2) and an explanation by Larry Meile and Darrell Eubanks in *FOGHORN* (March, 1985, p. 14 col. 1, #7, at p. 15, col. 1).

Alternatively, the number pad can use the same functions under such software as SmartKey II.

Special Function Keys

KEY-NDX.COM

For use with **DOCUMATE PLUS** to make an Index.

Keys 1, 2, 3: Place indexing code (...x, r, or a) at the beginning of line; move cursor to next line (^X — control X) and return to beginning of line (^QS)

0

1 ...x ^X ^QS "index"

inserts "...x" and drops cursor to next line (^X) at left margin (^QS) to code next line of text

2 ...r ^X ^QS "see"

inserts "...r" and c

3 ...a ^X ^QS "see also"

inserts "...a" and c

4 ^QA...x ^M ^MNG ^M erase "...x", without asking

5 ^QA...r ^M ^MNG ^M erase "...r", without asking

6 ^QA...a ^M ^MNG ^M erase "...a", without asking

7 "" ^H to enclose text with commas in quotes

8 ^QA "" ^M ^MG ^M erase quote marks, with Y/N option

9

Special Function Keys

KEY-TOC.COM

For use with **DOCUMATE PLUS** to make a table of contents.

0 ^N...COLUMNWIDTH 65 ^M...MARGINWIDTH 0 ^X ^QS

1 ^N...T1 ^X ^X ^QS

2 ^N...T2 ^X ^X ^QS

3 ^N...T3 ^X ^X ^QS

4 ^N...T4 ^X ^X ^QS

5 ^N...T 5 ^X ^X ^QS

6 ^N...T 6 ^X ^X ^QS

7 ^N...T 7 ^X ^X ^QS

8 ^N...T 8 ^X ^X ^QS

9 ^N...T 9 ^X ^X ^QS

SFK 0

Formats a table of contents so that page numbers appear at column 65, to the right (instead of left) of section headings. SFK 0, placed on the first line of the file, moves the cursor to a new line above (^N), writes on separate lines (^M), returns cursor to top line of text (^X), at left margin (^QS), where ...T1 level section heading may be added. Column width is at 65 and margin width, 0.

SFK 1-9

Inserts "...T1-9" (9 levels) section heading code [each heading level of TOC is indented three spaces from preceding level] on a new line above text heading (^N), and moves cursor to the line below the heading (^X ^X), at left margin (^QS) to proceed.

NOTE: Documate Plus requires that there be no space between the T and # for levels 1-4, but one space between the t and # for levels 5-16.

* * * * *

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Organizing a Diskette with MBASIC Programs

by W. Terry Whalin

Often several months go by and I don't use a single MBASIC program. Then when I use it, I have to review how to load a program, how to run it, etc. Also I have a number of game diskettes and other MBASIC programs which I enjoy using occasionally, but they are completely unorganized and each program has to be individually loaded every time.

MENU.BAS from the FOG library will help you organize those MBASIC programs easily. Then the next time you go to run them, you won't have to spend time reading the manual.

Last year, I checked out FOG GAME diskettes 1-12 from our local user's group. Taking a block of time, I systematically played all the games, recording which were working and fun to play (definitely a subjective evaluation). I only copied and kept the games I judged worth keeping.

GAM.007 to GAM.011 each had MENU.BAS. This program sets up a menu for the games on that particular disk and makes it easy to use. But I had reorganized all the games — removing some games and combining several different disks. This article will help you organize your MBASIC programs, if they are in a chaotic state of disorganization.

I've found this application particularly helpful for various game programs but it is general enough to be used with any series of MBASIC programs, e.g., I have an address label package in MBASIC and some other miscellaneous programs I have written or typed in from magazines. Recently I revised the DATA statements in the MENU program and also the individual game programs in order to get them to work properly.

First of all here is a listing of the program called MENU.BAS (from FOG/GAM.009). This should be typed in using the MBASIC editor and then debugged to eliminate typographical errors.

```
100 REM - MENU program by Jim Woolley, FOG Disk Librarian, 8/82
110 CLEAR
120 DEFINT I-N
130 DIM PROG$(41)
140 FMT$="###. &"
150 INPUT "Press <RETURN> for MENU",NBR
160 PRINT CHR$(26);
170 RESTORE
180 I=0
190 WHILE PROG$(I)<>"NOMOREDATA"
200   I=I+1:READ PROG$(I)
210 WEND
220 LAST=I-1:ILAST=LAST
230 IF ILAST>19 THEN ILAST=20
240 FOR I=1 TO ILAST
250   PRINT USING FMT$;I;PROG$(I);
260   J=20+I
270   IF J>LAST THEN PRINT
      ELSE PRINT TAB(25);:PRINT USING FMT$;J;PROG$(J)
280 NEXT I
```

```
290 PRINT
300 INPUT "Enter program number (0 to quit): ",NBR
310 IF NBR=0 THEN END
320 IF NBR<1 OR NBR>LAST THEN 300
330 RUN PROG$(NBR)
340 REM - Enter program filenames as DATA statements
350 DATA CRAPS,CUBE,DIAMOND,DICE,DIGITS,EVENWIN1,EVENWIN2
360 DATA FLIPFLOP,FOOTBAL1,FOOTBAL2,FURTRADR,GOLF,GOMOKO
370 DATA GUESS,GUNNER,HAMURABI,HANGMAN,HELLO,HI-Q,HOCKEY
380 DATA HORSRACE
998 REM - Next line must be last DATA statement
999 DATA NOMOREDATA
```

The DATA statements (lines 350-380) will have to be modified for every diskette you would like to run on a menu. I organized all of my game diskettes with this program. In each case, I copied MENU.BAS onto the diskette where I wanted a menu, then using the MBASIC editor revised the DATA statements so the MBASIC programs on that diskette were listed in the data. Note when typing in the DATA statements, the last program listed on each line is not followed by a comma. The program will hang up if you include one.

This program has a limitation of 40 files so do not try to enter more than 40 in the DATA statements. You may think that 40 is plenty but when I was organizing my games, I found that one of my diskettes had 44 games on it. Just be forewarned.

After you have copied MENU.BAS onto each diskette and modified the DATA statements for the particular diskette, an additional step remains. Each program on the list must be modified so once you finish a program, it will return to the menu. Here are some steps to modify your games or other MBASIC programs:

1. LOAD MBASIC in drive A.
2. LOAD the MBASIC program included in the menu and then at the prompt OK, type **LIST** ↵.
3. Look for the line in the MBASIC program that says **END** or possibly **RESET**. Usually this is a line by itself. If it is a single entry on the line, type the line number and a return. This erases that line. Then type the same line number and **RUN "MENU"** ↵, e.g., **999 RUN "MENU"** ↵.
4. Save the program onto the diskette as you revise it by typing **SAVE "B:filename"** ↵. Note a .BAS file extension is not needed but simply the name of the program. This is a very important step in the editing process and if it is not done, the program will not be changed permanently.

While going through this revision process, I learned that MBASIC has to be reloaded every time you change a diskette in drive B. I received an error message each time I changed diskettes, revised a program and attempted to save it unless I reloaded MBASIC. If you have set up your special function keys as described below, it is simply a matter of typing **^6** (Control 6).

These special function keys suggestions may help to make this whole revision process easier. Here are the SFKs on my MBASIC diskette which I set up using the program, SETUP.COM:

The left hand column is the starting address for the first hex digits on that line. In this case the hex number 7C occupies the address 20h and 74h occupies the address 2Fh. Since we want to change this line starting with the S of Standard we need to figure out what the address of the S. The S is the fifth ASCII character from the left — |, ., N, ., S — so we add 4 to 20h and come up with our starting address of 24h. I changed this line to read | N 10 cpi pitch. What I am changing starts with 10 so:

Enter	Comments
:CA24,10 cpi pitch	"Changes the bytes starting 24h note follow pitch with 3 spaces."
Standard pitch	"DU displays what the previous values were"
:D	"dumps the sector"
00 64204420 446F7562 6C65207C 2048204F	*d D Double H O*
10 76657270 72696E74 20636861 72202020	*verprint char *
20 7C204E20 31302063 70692070 69746368	* N 10 cpi pitch*
30 20202020 20207C5E 4A204865 6C702020	* ^J Help *
40 5E4B2042 6C6F636B 200E2020 5320556E	*^K Block . S Un*
50 64657273 636F7265 2020207C 204F204E	*derscore O N*
60 6F6E2D62 7265616B 20737061 63652020	*on-break space *
70 7C204320 5072696E 74696E67 20706175	* C Printing pau*

Our next step is to save the change to the disk. We do this with the W command.

Enter	Comments
:W	"Writes the sector to the disk"

Let's move on with the + command and Dump the next sector.

00 73652020 20207C5E 51205175 69636B20	*se ^Q Quick *
10 5E502050 72696E74 200E2020 58205374	*^P Print . X St*
20 72696B65 6F757420 2020207C 20462050	*rikeout F P*
30 68616E74 6F6D2073 70616365 20202020	*hantom space *
40 7C205920 4F746865 72207269 62626F6E	* Y Other ribbon*
50 20636F6C 6F727C5E 4F204F6E 73637265	* color ^O Onscree*
60 656E2020 20202020 200E2020 56205375	*en . V Su*
70 62736372 69707420 2020207C 20472050	*bscript G P*

In this sector I modified lines 20h, 40h-50h, 70h. Since I have the C. Itoh 8510 I don't use either the Phantom space or rubout, but I don't want to delete them all together because the INDEX program can use them and it is nice to be reminded which unused Print characters are available.

So I decided to combine the two symbols on lines 20-30h. What I said was "F,G not used in WS". This will just fit.

Again we have to figure out the starting address for our changes. I start with the space after the F. This is two characters to the right from the end of the ASCII display. The hex representation of the ASCII <SPACE> is 20h. We find our starting address by subtracting 1h from the end of the line 2Fh. Our address is then 2E.

Enter	Comments
:CA2E,<2C>G not used in WS	"I just showed you how to enter hex into an ASCII

string by using the <> symbols. 2C is the hex representation for "<" which is used as an address delimiter so if you want to enter it do it in hex."

:D "Dump to make sure the changes are what you want."

I also changed lines 40-50 and 70. Line 70 ends with the ASCII "G P". This is the start of G Phantom rubout which is where I want to put W,E Double width o/f. I can only get four characters of this on line 70. While DU will keep changing from line to line it will not cross sectors so we will have to change these three characters in this, sector save it and move on.

We want to change the last four addresses in line 70 so that means our starting address is 7Ch. Enter

:CA7C,W<2C>E

Check it with D to make sure it is right. I will leave you on your own to figure out how to change lines 40-50 so following the "Y" it reads Underline Line. Remember when you're done changing each sector to type :W to write the changes to the disk.

Before I go on I will show you the dumps of my last two sectors to show how they should look if you want to make the same changes I have.

00 73652020 20207C5E 51205175 69636B20	*se ^Q Quick *
10 5E502050 72696E74 200E2020 58205374	*^P Print . X St*
20 72696B65 6F757420 2020207C 204620C47	*rikeout F,G*
30 206E6F74 20757365 6420696E 20575320	* not used in WS *
40 7C205920 20556E64 65726C69 6E65204C	* Y Underline L*
50 696E6520 20207C5E 4F204F6E 73637265	*ine ^O Onscree*
60 656E2020 20202020 200E2020 56205375	*en . V Su*
70 62736372 69707420 2020207C 572C4520	*bscript W,E *
00 446F7562 6C652077 69647468 206F2F66	*Double width o/f*
10 7C20A0AD ADD5F3E5 F2A0A0D0 E1F4E3E8	* --User Patch*
20 E5F3ADAD A0207C53 70616365 20426172	*es-- Space Bar*
30 20726574 75726E73 200E2020 5420426F	* returns . T Bo*
40 6C646661 63652038 3531307C 20524554	*ldface 8510 RET*
50 204F7665 72707269 6E74206C 696E6520	* Overprint line *
60 7C205120 3C455343 3E205220 312F3622	* Q (ESC) R 1/6''*
70 204C4620 20207C79 6F752074 6F204D61	* LF you to Ma*

You can change hex the same way you changed ASCII except you use the CHnn command. Always use the delimiter — comma (,) — between each hex value. An example would be :CH23,20,09,E5.

Before we wrap this up I want to tell you about the < and > commands. < will store the current sector into a buffer and > will retrieve. With these two commands you can store a sector and copy it to another sector anywhere on the disk. Just remember, if you want to store it permanently, you must also use the W to write it to the disk.

I hope these articles have helped you understand how to use DU and will give you the courage to try. It was desperation

that got me started when a disk that I hadn't backed up properly (do back up) wouldn't read the directory and it had files that would have taken days to replace.

* * * * *

MBASIC Menu Program

by Jim Dunn

The following program had several origins. One was that I had an MBASIC program called MENU. When MENU was executed a menu of MBASIC programs was displayed on the screen. However, these programs may or may not be on the disk I was currently using. I have four MBASIC game disks and MENU was on only one disk. That MENU program had to be constantly updated as I added new games and deleted existing games. This was a big enough nuisance to keep me from putting MENU on all of my game disks.

Another reason was the existence of a MENU.COM file which would display all files ending with the COM extension and prompt me for a selection and then execute the selected COM program.

The last reason was that nephews and nieces would drop in and want to play games on my Osborne. This meant that I would have to be constantly supervising them and have no time to visit with their parents.

Youngsters tire easily of games, "crash" the program, or push the reset button by mistake. I needed a way of letting the computer do the majority of the "baby-sitting".

So I have written an MBASIC program that displays all files on the disk that have the BAS extension, prompts for a choice, and then runs the selected program. By setting up a disk in the following manner the computer will be able to do "baby-sitting" by itself.

Take a blank disk and SYSGEN it. Next prepare your version of AUTOST.COM to call B:MBASIC MAKEMENU and place the modified AUTOST.COM on your new blank disk.

Now use SETUP.COM to program one of the function keys. I defined function key 1 to:

^C RUN "MAKEMENU ↵

That is: "Control C space RUN space quote mark MAKEMENU carriage return" followed by two ESC keys to terminate the function key setup. Define the other function keys for your favorite commands and then save to your disk.

Next place on the disk your favorite MBASIC games and a copy of MAKEMENU.BAS. Now when you want to play games by yourself or with someone else, just power up, put the game disk in drive A and the MBASIC disk in drive B and press ↵.

AUTOST will do its thing and then have MBASIC load and run MAKEMENU which will display all *.BAS files on drive A. Now select a file from the menu and press return. When you finish the game or wish to try another game on the disk, just press control 1 and the MAKEMENU will once again display the game selection available on drive A.

MAKEMENU can also be used on non-game MBASIC disks as well. I hope this makes using MBASIC a little easier. It

should be easy to adapt MAKEMENU.BAS to the Executive and the Vixen since they both use memory mapped video.

```

10 REM WRITTEN BY JIM DUNN FOR USE ON OSBORNE 1
20 REM 1985 COPYRIGHTED BY JIM DUNN. ALL RIGHTS RESERVED
30 REM USE AUTOST TO CALL 'B:MBASIC MAKEMENU' TO AUTO
40 REM LOAD MENU AT BOOT TIME. ALSO SETUP A FUNCTION
50 REM KEY AS '^C RUN 'MAKEMENU<RET>' TO BE ABLE TO
60 REM TERMINATE A PROGRAM AND RUN THE MENU AGAIN.
70 REM THIS VERSION OF THIS PROGRAM IS FOR FOG AND
80 REM ITS MEMBERS.
90 REM
100 DIRMAX=64           'maximum directory entries
110 PRINT CHR$(26);     'clear Osborne 1 screen
120 DIM D(8,DIRMAX)
130 FILES '*.BAS'       'display all BAS files on screen
140 OFFSET=&HFOO0: COLUMN=0:Y=1 'peek video memory to get
150 VIDEO=OFFSET+COLUMN*14 'file names into array
160 IF (PEEK(VIDEO))=160 THEN DIRMAX=Y-1:GOTO 270
170 IF (PEEK(VIDEO))=32 GOTO 230
180 FOR X=0 TO 7        'read file name into an array
190   D(X,Y)=PEEK(VIDEO+X)
200 NEXT X
210 Y=Y+1: COLUMN=COLUMN+1
220 GOTO 150
230 OFFSET=OFFSET+128: COLUMN=0 'if the file name starts with
240 VIDEO=OFFSET+COLUMN*14 'a space drop down to the next
250 IF (PEEK(VIDEO))=32 OR (PEEK(VIDEO))=160 THEN DIRMAX=Y-1
   :GOTO 270
260 GOTO 180           'row
270 PRINT CHR$(26);    'clear screen after finding cursor(160) or
280 PRINT              'two spaces in a row
290 PRINT '*****'
300 PRINT ' * '
310 PRINT ' * INCREDIBLE MBASIC GAME MENU * '
320 PRINT ' * '
330 PRINT '*****'
340 PRINT
350 COLY=INT(DIRMAX/3) 'print three columns
360 IF DIRMAX/3>COLY THEN COLY=COLY+1
370 FOR Y=1 TO COLY
380   Z=Y
390   PRINT TAB(1);Z;'- ';
400   GOSUB 570           'print file name to screen
410   Z=Y+COLY
420   IF Z>DIRMAX GOTO 490
430   PRINT TAB(17);Z;'- ';
440   GOSUB 570
450   Z=Y+(COLY*2)
460   IF Z>DIRMAX GOTO 490
470   PRINT TAB(33);Z;'- ';
480   GOSUB 570
490   PRINT
500 NEXT Y
510 PRINT
520 PRINT 'Enter the NUMBER of game you wish to PLAY ':INPUT
   'and press RETURN ','C

```

cont. on page 78

We Explain Software Packages, Then We Teach You How To Use Them. *User's Guide* is the Magazine of Tutorials.

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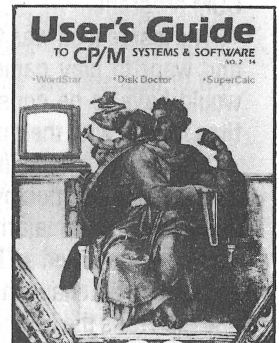
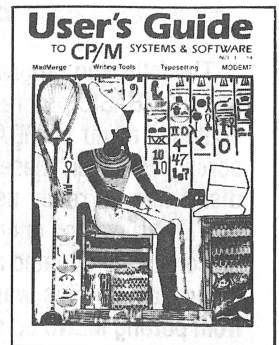
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FOG MEMBER LIBRARY NEWS

Library Notes by Jack Brown

These are the December releases under the new library format. When ordering please be sure to specify what format your computer uses.

-FOG/CPM.009: Printer utility programs

```
//CPM009 .DOC:
/NOV/85 :
OKI .COM: Set print modes for OKI 92/93 printer
OKI .DOC: Doc for OKI.COM
OKI84 .COM: Set print modes for OKI 84 printer
OKIC .DOC: Alternate character set editor for OKI 92
OKIC/CPM .COM: Generic CP/M version
OKIC/EX .COM: Osborne Executive version
OKICHA12 .COM: Character set editor for OKI 92/93
OKICHA12 .DOC: Doc file for OKICHA12.COM
OKISET3 .ASM: Set print modes for OKI 93
OKSETUP .ASM: Set print modes for OKI 82A
OKSETUP .COM: Compiled version of OKSETUP.ASM
SCIGRAPH .COM: Hi resolution X-Y plots on Epson with Graftrax+
SCIGRAPH .DOC: Prints strip graphs as well as single page
SIDEMT .COM: Sideways printing program for Mannesmann Tally
SIDEMT .DOC: Spirit printer (doc for SIDEMT.COM)
SIDEOKI2 .CHR: Character file for SIDEOKI2.COM
SIDEOKI2 .COM: Sideways printing program for OKI 92
SIDEOKI2 .DOC: Doc file for SIDEOKI2.COM
SIDEWAYS .PAS: TURBO Pascal source for SIDEMT.COM
SPRSCRPT .OKI: Sample character set for OKIC
TPATCH .COM: Patch that allows running TURBO Pascal on
TPATCH .DOC: Executive with 1.1 ROM (saves registers)
```

-FOG/CPM.010: Wordstar aids and filter programs

```
//CPM010 .DOC:
/NOV/85 :
ALPHA .COM: Use with Windex - Alphabetizes & counts words
AUTOST30 .COM: WS 3.0 Autost file for WSAVE
AUTOST33 .COM: WS 3.3 Autost file for WSAVE
COPY2WS .COM: Strips hard carriage returns
COPY2WS .DOC: Doc file for COPY2WS
COPY2WS .PAS: Source in TURBO Pascal for COPY2WS
EX14 .COM: Submit replacement - used by WSAVE
FILT .INF: Doc file for FILTA, FILTB, FILTW, FILTWC
FILT7 .COM: Strips WS bits and dot commands
FILT7 .DOC: Doc for FILT7.COM
```

```
FILTA .COM: Filters ASCII files (removes high bits & ctrl
chrs)
FILTB .COM: Filters BASIC files
FILTW .COM: Filters WS files (removes dot cmds, hardens
soft -)
FILTWC .COM: Same as FILTW except keeps CR LF
HRDSFT .COM: Makes hard CR soft, or soft CR hard
HRDSFT .DOC: Doc for HRDSFT.COM
OWS .COM: Eliminates 'screen jump' in WS on Osborne 1
OWS .DOC: Loads WS from logged drive (doc for OWS.COM)
PROPOR .COM: Reformats WS files for NEC 8023A or C. Itoh
PROPOR .DOC: ProWriter for proportional printing
PURETEXT .COM: Strips print ctrl chars, dot cmds, and high bit
PURETEXT .DOC: Makes WS files 'vanilla'
RESQ .COM: Hunts thru RAM for a phrase you supply
RESQ .DOC: Recovers from WS 'disk full' crash
SOFTRETN .BAS: MBASIC program to soften hard CR
TABS7 .COM: Inserts tabs into ASCII files
TABS7 .DOC: Works with .ASM or standard files
WINDEX .COM: Index program for WS
WINDEX .DOC: Keywords may be tagged in file
WS-CMDS .DOC: WordStar commands in handy form
WSO .COM: Load WS and overlays from user 0
WSO/WS15 .INF: How to use WSO and WS15
WS15 .COM: Load WS and overlays from user 15
WSAVE .DOC: Recover from WS 'disk full' crash
WSAVE12 .COM: Saves all of memory to disk
WSAVE12 .DOC: Recover from crash with text still in memory
WSAVE3/0 .SUB: Submit file for WSAVE & WS 2.26 & 3.0
WSAVE3/3 .SUB: Submit file for WSAVE & WS 3.3
WSFAST16 .DOC: Change WS3.3 to sign on faster & print in
background
WSFAST16 .HEX: Hex file for WSFAST16
WSFAST16 .SUB: Submit file to automate WS 3.3 patching
WSPAIR .COM: Find unpaired print control chars in WS
WSPAIR .DOC: Doc for WSPAIR
WSPROP1 .DOC: How to patch WS 3.0 & 2.26 for proportional
spacing
WSPROP2 .DOC: Patch WS 2.26 & 3.0 for proportional spacing
```

-FOG/CPM.011: TOUR 2.0 Outline/Idea processor

```
//CPM011 .DOC:
/NOV/85 :
MAKETINI .COM: Makes a terminal configuration file for your
MAKETINI .DOC: particular terminal
ROFFGUID .DOC: Description of ROFF functions added for TOUR
ROFFTOUR .COM: Formatted print program for TOUR
ROFFTOUR .RNI: Doc for ROFFTOUR.COM
TOUR20 .COM: Outline processor
TOURGUID .DOC: TOUR user guide
TOURREF .RNI: TOUR information/reference documentation
TRPRINT .HLP: Help for printing TOUR files
WRITGEN .COM: Program to print TOUR files
WRITGEN .DOC: Doc for WRITGEN.COM
```



-FOG/CPM.012: dBASE II files and programs

//CPM012 .DOC:
/NOV/85 :
AREACAL .CMD: Calculates enclosed area of a series of points
AREACAL .DBF: Sample data file for AREACAL
AREACAL .DOC: Doc for AREACAL
AREACG .CMD: Same as AREACAL but includes x-center of gravity

AUTHORS .NDX:
DATES .NDX:
DBASM .ASM: dBASE II callable machine language sub-routines
DBCLEAN .COM: Remove extraneous ^Z from dBASE II files
DBCLEAN .DOC: Lets you recover from flaky .DBF files
DBCLINIC .BAS: Updates .DBF file headers (in MBASIC)
DBFTOTXT .CMD: Convert .DBF file to MailMerge format
DBGRAF .DOC: Screen graphics for Osborne 1
DRAWBOX .CMD: Part of GRAFGEN
DTUNE23 .DOC: Command file utility shrinks and cross-
DTUNE23 .COM: references and more!
GRAFGEN .CMD: Screen graphics on Osborne 1
KEYWORDS .DBF: Database file for LIBRARY
KEYWORDS .NDX: LIBRARY index file
LIBADD .CMD: Sub-command for LIBRARY program
LIBED2 .CMD: Sub-command for LIBRARY program
LIBEDIT .CMD: Sub-command for LIBRARY program
LIBFIND .CMD: Sub-command for LIBRARY program
LIBRARY .CMD: Main entry to LIBRARY program
LIBRARY .DBF: main LIBRARY data base file
LIBRARY .DOC: Library cross-referencing system
LREPORTS .CMD: Sub-command for LIBRARY program
MEMTIP .DOC: How to use PRINT.MEM and SCREEN.MEM
PRINT .MEM: Epson printer macros
SCREEN .MEM: Osborne 1 screen macros
SUPERBAK .CMD: Backup and restore utility
ZIPS .NDX: LIBRARY index file

* * * * *

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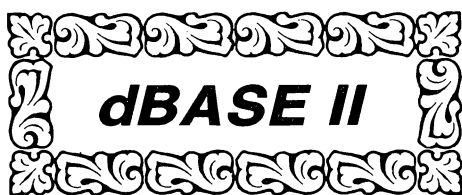
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Customize Those Reports: Control Your Epson Through dBASE II *by Charles V. Calcano*

Are you sick of the dBASE II report generator spewing out those standard columnar reports? Have you ever wondered whether you could customize your dBASE II reports or enhance the printing?

Well you can. However, the printing controls discussed in this article address only the Epson MX or FX (or Epson work-alike) printers.

I accidentally came across this fact that you could control your printer from within dBASE II on Section 4, page 82 of the of the grey dBASE manual (ver. 2.3b) if you received it from Osborne. Section 4, page 79 (manual ver 2.41) also hinted that you could do the same thing from within a command file. In both manuals, this fact is limited to just a few sentences under the heading of CHR(<number>).

Look to your Epson (or Epson work-alike printer) manual for an understanding of the CHR(n)'s and what they can do for you when included in a command file. Note that most will refer to the BASIC function CHR\$(<number>) — all you will need to do when working in dBASE is omit the \$ from the command line.

Now let's get all that information out of the data base by designing a customized report rather than going through the report generator. At the same time we are also going to control the printer from within the command file. These procedures will work without regard to the computer you are using.

Now it's time to get to work. We are going to work up a customized report and we are also going to print enhanced titles and headings for this report.

Fire up your computer. Load the dBASE program in drive A and place a formatted disk into drive B. Now create the following data base:

CREATE ↵

ENTER FILENAME: **B:TEAM** ↵

ENTER RECORD STRUCTURE AS FOLLOWS:

FIELD NAME, TYPE, WIDTH, DECIMAL PLACES

001 **LNAME,C,20** ↵

002 **FNAME,C,20** ↵

003 **ADD,C,30** ↵

004 **CITY,C,20** ↵

005 **STATE,C,2** ↵

006 **ZIP,C,5** ↵

007 **PHONE,C,8** ↵

008 **TEAM,N,1** ↵

009 ↵

INPUT DATA NOW? **Y** ↵

Add nine records at this time to your data base. Randomly and evenly divide your entries using 1, 2, or 3 when you get to the TEAM field.

Now we can work up a command file. Use WordStar in the non-document mode, or use any other popular text editor. Name the file **TEAM.CMD**. You need not include the comment lines which start with an *. They have been liberally used only for the purpose of explaining various program points. I should point out that if the following is not entered exactly, I shall not be responsible for the weird things your computer and/or printer may do. It can be, as you all know, a very unforgiving animal.

When through, save to drive B.

ERASE

SET TALK OFF

USE B:TEAM

* The next line asks for a sort on the TEAM & LNAME fields

INDEX ON STR(TEAM,1) + LNAME TO B:SORT

USE B:TEAM INDEX B:SORT

ACCEPT 'ENTER RUN DATE ' TO MDATE

SET PRINT ON

SET MARGIN TO 5

* The following lines allow you to enter the current date and

* then sets up the printer controls for the report headings

?

?

?

?

? 'DATE: ',MDATE

?

?

? + CHR(27) + CHR(69) + ' CUSTOMIZED REPORT'

?

&

? ' PRINTER ENHANCEMENT'

? ' DEMONSTRATION'

+CHR(27)+CHR(70)+CHR(27)+CHR(64)

* You can, at this time, print out any statements, instructions, definitions, etc., as done in the example below:

?

?

? '1. The program first allows you to enter a current date.'

? 'This date can be in any form you desire.'

?

? '2. Note that the print in the above heading has been empha-

? 'sized. This has been accomplished by the embedded CHR(n)'

? 'codes in the command file lines associated with the heading.'

?

? '3. Your attention is now drawn to the team headings below.'

? 'These headings are not only emphasized but they are also un-

? 'derlined. This, again, is accomplished by associated CHR(n)'

? 'codes embedded for these headings in the command file.'

?



```

* The next lines set up 2 variables: 'RECNO' to count the
* records as they are processed and 'COUNTER' to consecutive-
* ly number team members in each group below.
STORE 1 TO RECNO, COUNTER
DO WHILE .NOT. EOF
* The following 'IF' statements set up memory variables to
* recognize a change of teams as the data base is processed
  IF TEAM = 1
    STORE 1 TO MTEAM
  ENDIF
  IF TEAM = 2
    STORE 2 TO MTEAM
  ENDIF
  IF TEAM = 3
    STORE 3 TO MTEAM
  ENDIF
* The following lines control the printing of the 3 team head-
* ings at the appropriate time. These can be added as many
* times as there are teams.
* Also notice the embedded CHR(n) codes in the following lines
* which cause the titles to be enhanced and underlined.
  IF MTEAM = 1 .AND. COUNTER = 1
    ? CHR(27)+CHR(69)+CHR(27)+CHR(45)+CHR(1)+ 'MEMBERS OF
THE FIRST TEAM: ';
+CHR(27)+CHR(0)+CHR(27)+CHR(70)+CHR(27)+CHR(64)
  ENDIF
  IF MTEAM = 2 .AND. COUNTER = 1
    ? CHR(27)+CHR(69)+CHR(27)+CHR(45)+CHR(1)+ 'MEMBERS OF
THE SECOND TEAM: ';
+CHR(27)+CHR(0)+CHR(27)+CHR(70)+CHR(27)+CHR(64)
  ENDIF
  IF MTEAM = 3 .AND. COUNTER = 1
    ? CHR(27)+CHR(69)+CHR(27)+CHR(45)+CHR(1)+ 'MEMBERS OF
THE THIRD TEAM: ';
+CHR(27)+CHR(0)+CHR(27)+CHR(70)+CHR(27)+CHR(64)
  ENDIF
* The next series of lines set up the print pattern for the
* members in numerical order within a team along with the names,
* addresses, and telephone numbers. Since the FNAME field is
* trimmed, additional CHR(n)'s are utilized.
* IE., CHR(68), CHR(25) and (CHR(0), to cause the phone column
* to be printed at a tabbed position. CHR(9) is employed to
* activate the tab set-up.
* Otherwise the phone numbers would be printed as a ragged
* column.
    ? CHR(27) + CHR(68) + CHR(27) ; + CHR(25) + CHR(27) +;
CHR(0)+STR(COUNTER,1),'. ',TRIM; (FNAME),LNAME,' ', + CHR(27);
+ CHR(9) + PHONE
    ? ' ',ADD
    ? CHR(27) + CHR(68) + CHR(27) ; + CHR(0) + '
    ',TRIM(CITY),', ',STATE,ZIP
    ?
    ?
* The following lines set up the limit of members that can be
* listed on the first page due to the heading and any lead-in
* paragraphs. These lines also print the page number and advance
* the paper to the next page.

```

```

IF RECNO = 5
?
?
?
?
?
?' - 1-'
?
?
?
?
?
?
?
?
?
?
?
?
ENDIF
* On the second and third pages determine the number of members
* that can be listed on a page. In this example, we will use 10
* members per page.
* You will then use this figure (10) and add it to the above
* RECNO to determine when the second page is full. Repeat this
* step for as many pages as you may require in your report.
  IF RECNO = 15
    ?
    ?' - 2 -'
    ?
    ?
    ?
    ?
    ?
    ?
    ?
    ?
    ?
    ?
    ?
    ?
    ?
  ENDIF
* Add another 10 to RECNO to stop page 3 when it is full and
* advance to the next page.
  IF RECNO = 25
    ?
    ?' - 3 -'
    ?
    ?
    ?
    ?
    ?
  ENDIF
* The next line adds 1 to the previously set memory variable as
* each record is processed. It is against this variable that
* preceding 'IF' statements for RECNO are tested and which
* control pagination.
  STORE RECNO + 1 TO RECNO
  SKIP

```



```

ERASE
? CHR(12)
? ' This is an example of the '+ CHR(15) + 'COMPRESSED mode.' +:
CHR(13)
? CHR(10) + CHR(10) + CHR(10) + CHR(10)
SET PRINT OFF
@ 4,0 SAY ' Please look at the printer to see if this is the type'
@ 5,0 SAY ' that you desire.'
@ 7,0 SAY ' Do you wish to change back to REGULAR mode? (Y/N)'
?
WAIT TO reply
IF !(reply) <> 'Y'
    RELEASE reply
ELSE
    ?
    SET PRINT ON
    ? ' This is an example of the '+ CHR(18) + 'REGULAR mode.' +:
CHR(13)
    ? CHR(10) + CHR(10) + CHR(10) + CHR(10)
    SET PRINT OFF
    WAIT
    RELEASE reply
ENDIF
RETURN

```

When you cause PRNTMODE to execute be sure your printer is on. It will print out one line that changes from the normal print font to a compressed font. The printer will also feed the paper forward a couple of lines and your monitor will ask you to verify whether this is the type style you desire.

If you respond y or Y, your report will print in compressed mode. If you respond otherwise, your printer will print one more line as it returns to a normal print mode. It will wait for you to review this change and press return. The source of these changes are the ASCII characters you enter in the 'This is . . . mode' statements. The string of CHR(10)'s cause the printer to advance the paper forward a few lines.

(NOTE: These are relevant to the Epson).

If you build your PRINT command properly with some type of looping statement you can print all your reports from the same command file and adjust your print font before each report if you desire. If you have a different printer, use the ASCII characters necessary to accomplish the change in print styles you desire.

Try this routine out and see if it makes your report generation a little easier. By the way these routines were generated on version 2.3b.

Till next time . . .

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dBASE II: Finding Where One String Occurs Within Another

by Phillip Greenberg

If you're like me, every so often you discover another aspect of dBASE II that you never knew existed. Here's one that many people don't seem to know about.

To be able to use this less well known tool, you have to understand the dBASE string function. The dBASE string command is:

\$(string,x,y)

This means — for the character string "string", take the portion that starts *x* spaces from the left and which is *y* characters long. In other words, **\$(FOGHORN,4,4)** means start at the fourth character and — including it — take the string that is four characters to the right. The fourth character is **H**, and the four character string starting with **H** is **HORN**. The command **\$(FOGHORN,1,3)** would start at the first character and take the next two as well. In other words, **FOG**.

With that under our belt, we proceed to the little-known dBASE command:

@("<string1>","<string2>")

What this means is: "Where does string1 occur in string2?"

If you entered:

? @("H","FOGHORN")

the response would be **4** (since the **H** occurs as the fourth letter of the string "FOGHORN").

Here's a good use for this tool. Have you ever constructed a dBASE mailing list with both city and state, e.g., **Daly City, CA**, within the **ADDRESS** field — only to discover later that you really would have preferred to have the state in a separate field? This device can solve the problem.

First, copy the structure of your existing data base to a new data base and modify the structure of the new data base to add a two-space character field named **"STATE"**. Then append from your old file all the original records.

Now, create the following wonderfully brief command file.

```
GO TOP
DO WHILE .NOT. EOF
  STORE ADDRESS TO ADD
  STORE @(' ',' '&ADD) TO C
  STORE C+2 TO D
  STORE C-1 TO E
  REPLACE STATE WITH $(ADD,D,2)
  REPLACE ADDRESS WITH $(ADD,1,E)
  SKIP
  IF EOF
    CANCEL
  ENDIF
ENDDO
```

Voilà! Here is what we've done.

GO TOP
DO WHILE .NOT. EOF

STORE ADDRESS TO ADD

STORE @(' ',' '&ADD) TO C

STORE C+2 TO D

STORE C-1 TO E

REPLACE STATE WITH \$(ADD,D,2)

REPLACE ADDRESS WITH \$(ADD,1,E)

SKIP
IF EOF
ENDO

Start with first record.
Keep doing this until the
end of the data file.

Store the contents of the
ADDRESS field to the
memory variable **ADD**
STORE ADDRESS TO
ADD.

Find where the comma
occurs, and store that
number to **C**.

Add two spaces to **C**,
since that's where the
existing two-character
state designation now
starts.

Subtract one space from
C, since that marks the
end of the city (one
space to the left of the
comma, right?).

Locate the two-char-
acter state substring
and put it in the **STATE**
field.

Replace the address
field with the city only.
Go the next record.

Because many program-
mers believe the loop
should never actually
stop at the **ENDO**.

Nifty, isn't it?



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OSBORNE 1

Review of G2 System's Conversion

by Chuck Warren

I have owned a blue case, DD Osborne 1 since late 1983. Like many other Osborne owners, as my experience with the computer grew, the limitations of the system itself became more apparent. By the beginning of this year, I was becoming discouraged about the inflexibility of changing screen sizes without reconfiguring the ScreenPac setup option (or formatting separate disks for each display format), and about the lack of storage available on the standard double density disks.

My alternatives were varied. I ruled out buying a second system since I already had too much time and money invested in my present computer and software (and for my applications, CP/M works just fine, thank you). I also ruled out the Nuevo conversion since I would have to replace the Osborne DD board with a Nuevo board (that seemed like throwing money away; i.e., replacing one perfectly good component with another).

After a great deal of consideration, I contacted Doug Griswold at G2 Systems Design. His company offered a new BIOS, OZROM and two quad disks installed for \$649. The price seemed reasonable, so I shipped my machine off to G2 with instructions to complete the modification and also install an internal fan and switches on the front panel to control the main power and the built-in monitor.

The G2 modification offered the benefit of using most of the existing Osborne hardware and firmware, while also allowing the display to be changed with three simple toggle commands from 52-80-104, a much more direct setup program (running from a menu instead of a series of requests as before), much faster disk access and the ability to modify the drive B to emulate any of about 19 standards (sorry, no MS-DOS).

Included with the modification were several new programs which really make the Osborne a more efficient machine. Here's a summary of the features, presented from a user's point of view.

ANALYZE

Got a mystery disk that can't be identified? No problem with this program. It will tell you what the disk configuration is by bytes per sector, sector per track and number of tracks.

COPY4/FORMATS6 When used together, these programs replace the old Osborne COPY program, and are faster due to faster disk access.

DDEF5

Bring this program up and you can reconfigure either of the disk drives to one of 19 different formats with one key-stroke. Included are the Osborne Vixen, Osborne SS and DD, DEC, IBM (CP/M-86) Xerox, Morrow, Kaypro and others. This is a very powerful option for users who work from several different systems.

SETUP1

A menu-driven program allowing you to set printer configurations, set the display default, program function and arrow keys and autostart the computer by simply naming the program you wish to bring up.

As well as these programs, all of the features of OZROM are included in the installation plus your choice of increased disk storage capacity ranging from 380K to 780K per drive.

I've had my machine back for a few months and am learning more about the increased power each day. For example, I've got Personal Pearl running on one disk instead of the box-full that was required under the old DD setup. I have a travel disk with WordStar, SuperCalc2 and my modem communications program (with nearly 300K left over). My data disks now can handle more than 200 files, stored in an efficient manner and access is faster due to the faster disk speed.

I can toggle back and forth between 52-80-104 displays on the built-in and external monitors, redefine and save multiple sets of special function keys (about as close to macro commands as I'll ever get on a CP/M system) and always find my cursor because now it blinks.

G2's modifications work. They are reasonably-priced and certainly compare well with Nuevo modifications. I estimate my Osborne has gained three to four years of efficient use because of the modifications and I only wish I'd done it earlier.

For more information, contact:

Doug Griswold
G2 Systems Design
PO Box 19733
Greensboro, NC 27419
(919) 855-3887
* * * * *

A True Hardware Reset for the Osborne 1

by Jim Dunn

I have installed in my Osborne 1 a SWP CO-Power 88 board which implements a 256K RAM-disk in CP/M. Using the RAM-disk is great for speeding up any software which uses floppy disk accesses.

One irritation however, is that some software for the Osborne 1 cannot be used with the RAM-disk. Media Master

and the Osborne utility program COPY are two such programs. In order to format a new diskette or convert to a different format I must first power down the Osborne, format or convert a diskette, reload the RAM-disk and then move files to the just created RAM-disk.

I modified my Osborne to give me true hardware reset. Now when the RESET button is pushed both the Z80A and the 8088 processors are reset but the contents of the memory chips does not change (the contents are lost if you power down and back up). This allows me to format a disk in the middle of my work by exiting my current job, pressing RESET, booting the disk with COPY or Media Master, format or convert a disk, exit, press RESET, boot with my RAM-disk and presto, the RAM-disk is still there with all files intact.

This modification also allows easy recovery from a program that "locks up" or "crashes".

The following is an article by Doug Griswold, now of Greensboro, North Carolina and was sent to me by Debbie Jenkins of SWP in response to my question about a hardware reset for the CO-Power 88 processor.

Pressing the RESET button on the front of the Osborne 1 computer will usually produce the desired results — you get the attention of the computer immediately. This will not ALWAYS work, however.

The RESET button is actually an interrupt, and not a true reset. The times that the RESET will not work are when the interrupts are disabled, generally whenever another "bank" of memory is accessed. Should a program crash and issue a DI command, the only way to recover is to turn the power off.

This "interrupt" is guaranteed to work, but the contents of memory are deleted.

In addition, some hardware add-ons for the Osborne, e.g., co-processors and hard disks, depend on the Z-80 to communicate with their respective processors.

If, in the event of a system crash, the Z-80 is interrupted but not reset, the devices "attached" to the Z-80 will have their lines of communication cut with no way to reestablish them short of turning the power off. If these devices were depending on a program or data in memory, that data will be lost.

A RESET would solve the problems and is possible on the Osborne 1.

The following modifications are not for the novice, anyone who does not know how to take their computer apart, or anyone who does not wish to make a fairly permanent change to their logic board. Read all of the instructions before starting the modification.

Required equipment:

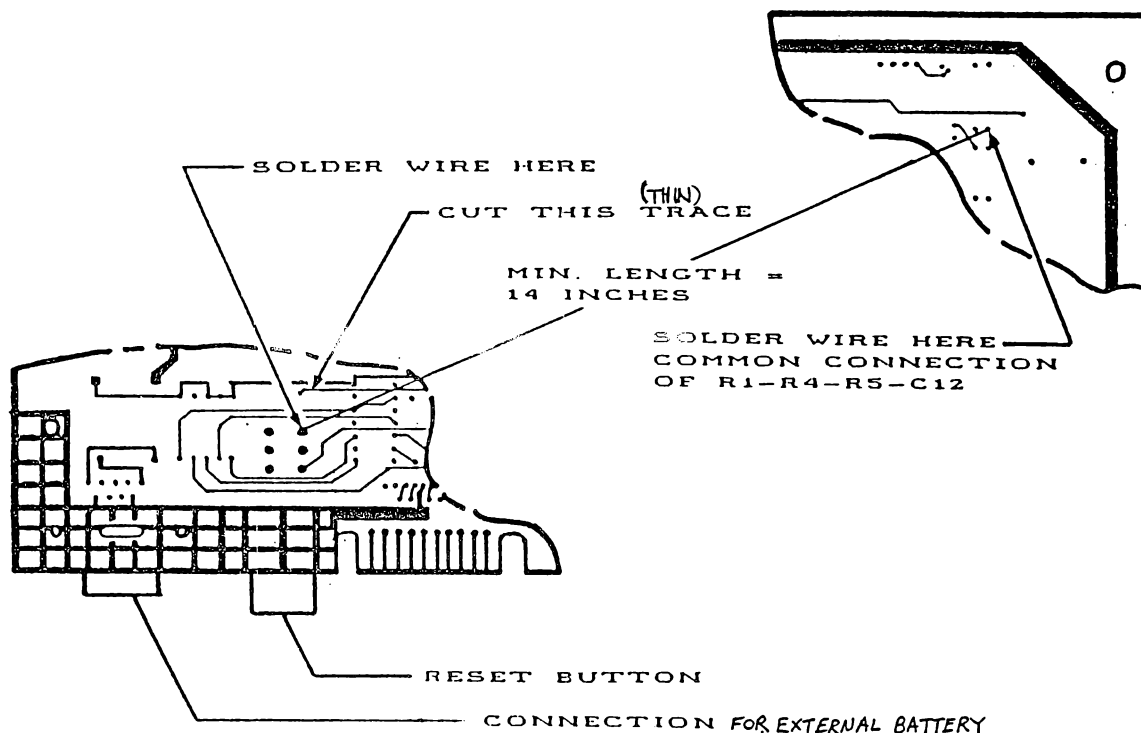
- 1) Phillips screwdriver (#2 — 5 in.)
- 2) Small soldering iron and solder
- 3) Minimum of 14" of wire wrap wire
- 4) X-Acto knife with sharp blade

Disassemble your computer to the point where the logic board is free and clear of the chassis. Referencing the attached drawing (Fig. 1) position the logic board with the battery connection and reset button on your lower left. (The PC board components will be on the bottom side in this position).

Looking at the lower left area of the board, locate the trace to be cut and carefully scrape the green solder mask material off it, cut across the trace with the X-Acto knife and remove a small section of the trace.



Figure 1



Take the wire wrap wire and solder one end of it to the uppermost right-hand post of the reset button terminals. Take the other end of the wire and solder it to any point of the common connection between R1-R4-R5-C12. Figure 1 shows the junction to be soldered to in the upper right of the drawing.

This completes the hardware reset modification. Since the RESET button is now a real RESET, there will be a noticeable difference in operation when the button is pressed. As long as the RESET button is held down, the drive lights will be on, the bell will beep, and the drives will run.

This is the same condition that applies when the power is first turned on, except that the Z-80 now thinks that the power is being continuously "just-turned-on" and so the lights, bell and drives will be on as long as the reset is pushed. Memory, or at least the TPA, is not wiped out.

This modification will allow external devices to be RESET without turning off the power. Good Luck.

* * * * *

Connecting a Modem to the Osborne 1 by Howard Gerber

If you want to connect an external modem to your Osborne 1 Serial RS232 port, you will need a modem cable. The Osborne is configured as a DCE device — meaning that it thinks that it's the computer and the other end of the cable is a terminal or printer. Unfortunately, most modems also are configured as DCE devices; thus you will need a cable that reverses these signals. The following is the pinout for such a cable:

Osborne 1	Serial RS232 Port	External Modem
Transmitted Data	2 (-----	3 Received Data
Received Data	3 -----)	2 Transmitted Data
Request To Send	4 -----)	5 Clear To Send
Clear To Send	5 (-----	4 Request To Send
Data Set Ready	6 -----)	20 Data Terminal Ready
Signal Ground	7 -----	7 Signal Ground
Data Terminal Ready	20 (-----	6 Data Set Ready

(arrows indicate direction of signal flow)

The connectors on both ends are DB-25S. Some modems won't need all these signals, but this cable should be able to talk to just about any external modem made.

[I support your last sentence, Howard. I've always used a piece of four-conductor telephone wire with a DB-25S on each end. I run 1 and 7 straight through and cross 2 and 3, just as the Hayes manual suggest. Since the Osborne 1 doesn't support the Data Terminal Ready signal on pin 20, I have set switch #1 to the DOWN position (the factory setting) to tell the Hayes that the Osborne is always ready. David]

* * * * *



"ANYCODE", Anyway by Donald Wechsler

[To get the best from this article, some background reading is advised. The article referred to in this piece is from the February, 1985 Portable Companion, pp. 32-36 on ANYCODE, written by Doug Hurst.]

If you are interested in, for example, using italics for single word emphasis within your WordStar text file; using a superscript for footnoting; or a subscript for writing math formulas, then you should consider ANYCODE.

ANYCODE is a modification of WordStar which allows you to send control codes to your Epson printer (and other printers), from within the WordStar text. The embedded characters are executed by the printer during normal flow of operation and no further instructions are required — such as the BASIC statements which Epson describes — for transmitting control codes.

ANYCODE was documented for the Osborne 1, in the *Portable Companion* (February, 1985, pp. 32-36.).

With the following letter to *Portable Companion*, I am describing a specific installation, involving an Executive and an Epson FX-80.

I am responding to Doug Hurst's article on ANYCODE, in the *Portable Companion* (February, 1985, pp. 32-36), and the follow-up letter (May/June/July, 1985), which indicated possible installation problems on the Executive under CP/M-PLUS. I assumed that since the original article referred to DDT, the installation was done on an Osborne 1 under CP/M 2.2, so it was reasonable to expect some differences.

I have completed an ANYCODE installation for the Executive with an Epson FX-80 and am reporting it with particular emphasis on these differences. Doug Hurst's article should be used as a reference for the following installation steps:

1. My previously existing WS.COM configuration contained patches, so I was concerned about MORPAT: space. However, in both the patched version and the original WordStar 3.3 Executive version at least 126 bytes, beginning at address 02BBh, were clear (discovered using SID (SID B:WS.COM), with its "Display" command (#D02BB)). So I continued.
2. The ANYCODE assembly source was typed into a WordStar Non-document file (without remarks), named ANYCODE.ASM.
3. The source was assembled using the MAC assembler (MAC B:ANYCODE.ASM). MAC produced three files:

ANYCODE.HEX, ANYCODE.SYM, and ANYCODE.PRN.

4. ANYCODE.HEX was read into WS.COM (SID B:WS.COM) (#RB:ANYCODE.HEX).
5. This modification was written to disk (#WB:WS.COM, 0100,4680). (The addresses 0100 and 4680 were given as PC and NEXT, when WS.COM was loaded to SID. Your addresses will probably differ.)
6. Finally, the WS.COM printer driver was modified, using SID's "Assemble" command (#A071C). This modification was also written to disk (#WB:WS.COM,0100,4680).

NOTE: Throughout the installation, working files (such as ANYCODE.ASM, and WS.COM) resided on drive B, while program files (such as MAC.COM, and SID.COM) were on drive A.

I am using ANYCODE with WordStar on a pilot disk, during a test period. No side effects have yet been discovered. All of the print modes identified in Doug Hurst's test file (his Fig. 2) can be activated from within WordStar text, and I am "...~34 tickled pink~35". [If you read Hurst's article you will get this.]

* * * * *

Baby WordStar

by Garth Bennett

My Executive is now over a year old and sits in my home happily doing the business and fun things that I ask of it. One problem area for me has been getting my family more involved in its use. I don't mean to the degree that I am, but as an "end user" so to speak.

Some recent articles in the *FOGHORN* and the *Portable Companion* have helped me rig up WordStar so that it is easily accessible by my student wife (a former secretary who still loves her Ollivet Editor) and my two teenage daughters.

As it seems that everybody else in the world has input about WordStar, I thought that I would join the crowd.

The goal here is to make this powerful program very easy to use for anyone from the moment they sit down. The first step was to take a copy of the WordStar disk and use WINSTALL to make some modifications to the defaults. If you have never used WINSTALL before, don't worry, because the program is menu-driven and will lead you through it very easily.

The defaults that I changed were the ones outlined in a *Portable Companion* article (January/February) written by Diane Paige Thompson. Actually it was this article that showed me how easily this all could be done.

Dr. Thompson had the default changes on a function key but I wanted to use that function key to print a file. She also set up the other function keys as outlined in Fig. 1. The defaults changed were:

Help menu-off
Right justification-off
Hyphen help-off

The Print a File function key (0) came from Barry Plotnick in the March edition of *FOGHORN* and works like a charm. The

function keys are arranged using SETUP as follows: (^ means control).

Fig. 1

- | | |
|------------------|-------------------------------------|
| 1. ^KB | — start a block of text to be moved |
| 2. ^KK | — end a block of text to be moved |
| 3. ^KV | — move a block of text |
| 4. ^B | — reform a paragraph |
| 5. ^KD | — exit and save text |
| 6. ^Z | — read ahead |
| 7. ^- | — delete to the left of the cursor |
| 8. ^G | — delete at cursor |
| 9. ^W | — read back |
| 0. ^KS^KP<ESC>^E | — print your file |

The next effort was to start the program for the user and a PROFILE.SUB and a GET file helped in this regard. Using WordStar in the non-document mode, the PROFILE.SUB was set up with:

get file start(system)↵ (carriage return)

The WordStar's non-document mode was used again to set up the get file as follows:

w.s↵
l B↵
D

It seems to me that all this should work from the profile.sub file but it doesn't in my case so remember that your WordStar disk will need GET and SUBMIT as well as the usual WordStar and system files to make all this work.

Good luck with what I call Baby WordStar. I know that it has helped this family move in the computer direction.

[Reading the *Portable Companion* article mentioned may help you even more if you are interested in developing your own "Baby WordStar". Ed]

* * * * *

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SRX Catalog

Delphi Data Systems and SRX Systems announce a special pricing for the SRX Catalog complete with a listing of the FOG Disk Library (FOG-Alog). From now until 1/1/86, FOG members may order this package for \$54.95 plus \$5.00 S&H. Verified FOG A.M.O. librarians and FOG Sysops may order the package for \$19.95 plus \$5.00 S&H. Contact Delphi Data Systems at P.O. Box 391567, Mt. View, CA 94039-1567.

* * * * *

cont. from page 63

```
528 'build a string to use to load and run selected file
530 G$=CHR$(D(0,C))+CHR$(D(1,C))+CHR$(D(2,C))+CHR$(D(3,C))+
    CHR$(D(4,C))+CHR$(D(5,C))+CHR$(D(6,C))+CHR$(D(7,C))
540 PRINT ' ' LOADING ' ';G$
550 RUN G$
560 END
570 FOR X=0 TO 7      'file name needs to be converted
580   PRINT CHR$(D(X,Z)); 'from array to ASCII
590 NEXT X
600 RETURN
```

* * * * *

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John Gaudio is an electrical engineer holding two U.S. Patents on computer systems. He's been a consultant to Osborne Computer Corporation and continues to write for their magazine, the Portable Companion, Foghorn, Dog Bytes, and his own newsletter, the Survivor's Guide. Since 1981 he's been helping people get more from their Osborne Computers.

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